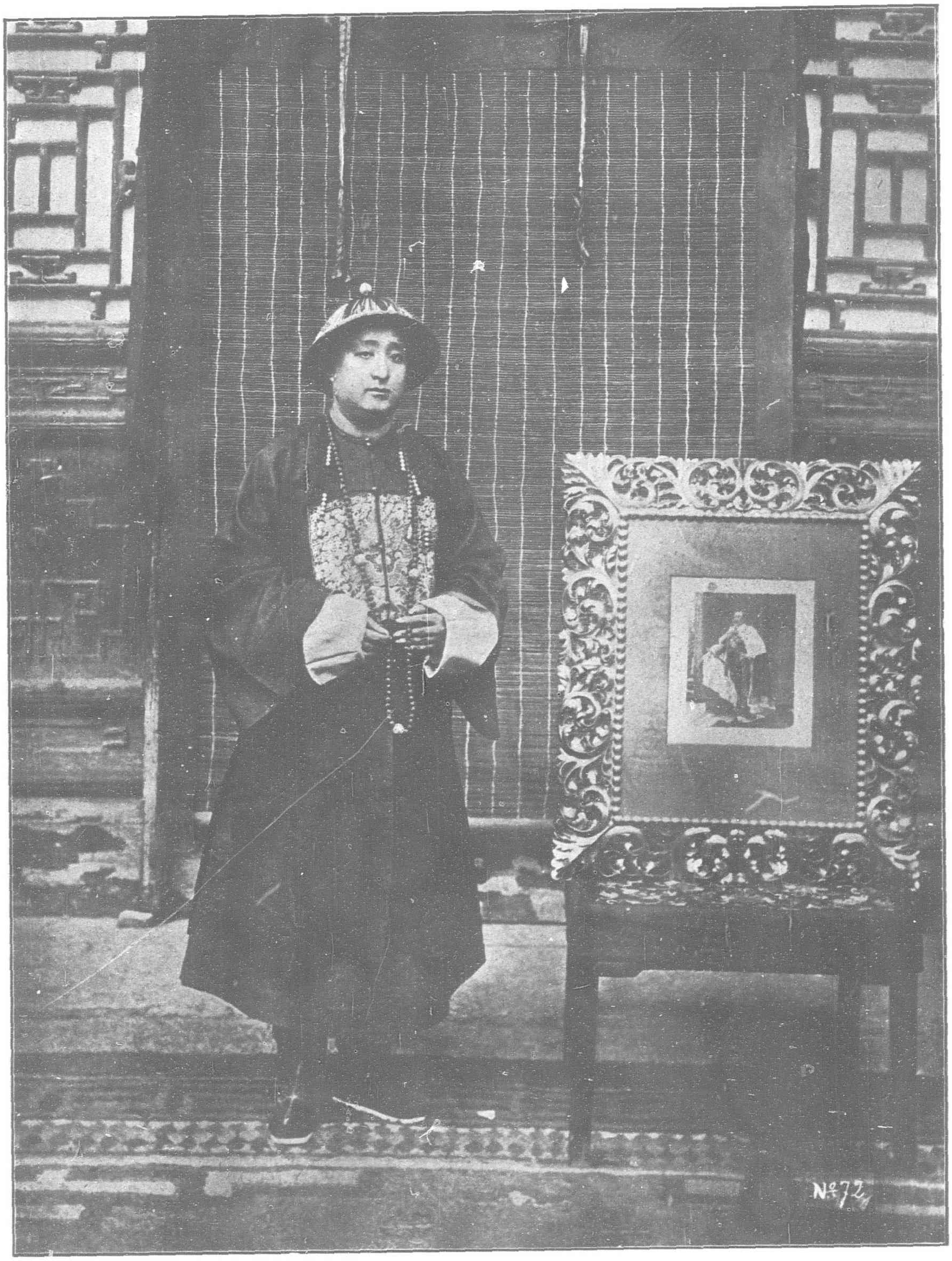
Special Supplement of
THE FAR EASTERN REVIEW
June, Nineteen Hundred and Ten



His Highness, DUKE K'UNG.

The lineal descendant (of the 76th generation) of Confucius. A tall, strongly made, superb representative aristocrat of the Chinese race, with an unbroken lineage extending over 24 centuries. The title is the oldest in the world, and one of the very few in China descending "without diminution" from father to son, Duke K'ung is progressive, and has founded a school at the ancestral home in which English is taught. He resides at Choufou in Shantung, where the Great Teacher lived, taught and lies buried. His Late Majesty, King Edward, sent his photograph to the Duke, who prizes it as one of his most valued possessions.

THE FAR EASTERN REVIEW
COMMERCE ◆ ENGINEERING ◆ FINANCE

VOL. VII. MANILA, P. I., SHANGHAI, AND YOKOHAMA, JUNE, 1910 No. 1.

NEUTRALIZATION, EXTENSION, OR COERCION?

When Mr. Knox, the American Secretary of State, proposed the neutralization of the Manchurian Railways as the surest and safest way of preserving to China the undisputed enjoyment of her sovereign rights in the Three Eastern Provinces, of insuring the practical operation of the Open Door and of contributing to the peace of the world by eliminating one of the possible causes of future dissensions, his plan was ridiculed and derided as unpracticable, and rejected by the interested powers as opposed to their schemes for political and commercial aggrandizement. Both Russia and Japan protested most emphatically against any such interference with their acquired rights, and European opinion, with almost unanimous accord, greeted the scheme as a diplomatic blunder. But, as Mr. Knox remarked, he did not expect that his scheme would meet with immediate success, and hardly hoped for a definite answer for several months. So he, at least, was not disappointed. The general opinion is that his scheme has failed, and the episode past and buried, only to be remembered by political opponents who desire to cast discredit for what they prematurely term his errors of diplomacy. But despite all the criticisms, disapprovals, and general decrying of the scheme, time will demonstrate the wisdom of Mr. Knox's diplomacy. Sooner or later, the interested parties will again be compelled to face the issue, and if foreign professions of friendship to China and the Open Door are sincere, other nations will lend their support to the Knox proposal as the only way to preserve peace and the integrity of China. Indeed, unless all signs fail, the time is not far distant. In fact, certain forces are already active hastening the day when a crisis will come in the affairs of China arising out of the Manchurian situation, where neutralization is the only alternative to coercion.

THE COMMANDING OFFICERS OF THE MANCHURIAN MODERN ARMY, (EX-VICEROY HSU IN CENTER)

The Port Arthur and Talienwan Agreement of March 27th, 1898, providing for the lease of the Liaotung peninsula to Russia, stipulates, in Article III, that the duration of the lease shall be 25 years from the day the treaty is signed, but it may be extended by mutual agreement between Russia and China. Article VIII covers the extension of the Chinese Eastern Railway to include a branch to Talienwan, subject to the same conditions as the main agreement of 1896. This provided that the Chinese Eastern Railway would revert to China at the expiration of 80 years, and may be repurchased at the end of 36 years. By the Treaty of Portsmouth, Russia's rights were transferred to Japan and officially recognized by the Chinese Government in 1905.

(*Continued on page 3.*)

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MANILA, SHANGHAI, AND YOKOHAMA, JUNE, 1910

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TO WHOM DOES THE LARGE SURPLUS FUND OF THE IMPERIAL CHINESE MARITIME CUSTOMS SERVICE BELONG?

The *Shanghai Times* of March 28th ulto., in an editorial on The Imperial Maritime Customs, discloses a situation in the administration of this service which gives food for thought. Dr. J. E. Fergusson, the proprietor of the *Shanghai Times*, is one of the foremost foreign authorities on Chinese political affairs, and has held the most intimate relations with many leading Chinese officials. For many years he filled the post of Foreign Secretary to H. E. Sheng Kung-pao when that official had control of all the railways in the Empire, and he also acts as Adviser to the Viceroys of the Liang Kiang and the Hu Kwang. Dr. Fergusson has long been in close touch with the central authorities at Peking and has enjoyed their confidence to a degree only surpassed by Sir Robert Hart. Dr. Fergusson, therefore, is in a position to state authoritatively the facts relating to many questions of importance, and his editorial on the Imperial Maritime Customs will be accepted as echoing the sentiments of the Chinese Government.

Dr. Fergusson, in commenting on the succession of Mr. Aglen to the post of Inspector-General left vacant by the resignation of Sir Robert Hart, says:

> "It is fortunate that during these years Mr. Angel will be in charge, for he is a man in the prime of life and with a thorough knowledge of the routine work. He will now be called upon to solve the larger problems which surround the future of the Imperial Maritime Customs. These larger probems include the relation of the Service to the Chinese Government, the abolition of the system of Farmer-general by which the Inspector-General receives a stated sum for the collection of the revenue at each port and the transference to the Chinese Government of the large balance which, it is understood, now stands to the credit of the Service out of the unused funds allocated from each port for the support of the Maritime Customs. While these affairs were all in the control of Sir Robert Hart there was no necessity of disturbing the arrangement, but now that a change is being made, it is high time that the public should know the internal management of the Maritime Customs. A full statement should be made public as to the amount taken over by Mr. Aglen from Sir Robert Hapt and held by him as trustee on behalf of the members of the Service. Unless this step is taken there can be no possibility of establishing a closer relation between the Customs and the Chinese Government, and without such closer relationship it is difficult to see how efficient management can be continued. Mr. Aglen is probably as unfamiliar with the inside working of the Inspector-General's office as any other man in the Service, but it is to be hoped that he will take the public into his confidence by giving in the next Annual Report a full statement of the present financial condition of the Inspectorate-General."

And here Dr. Fergusson gives the world an insight into a situation which calls for an immediate explanation.

Sir Robert Hart, in his autocratic administration of the Imperial Maritime Customs, conducted its affairs and disposed of the patronage and salaries without reference to any higher authority. The Chinese Government, it appears, set aside from the customs receipts of each treaty port a stated sum for the maintenance of the Customs Service which was periodically forwarded to Sir Robert Hart at Peking, and all disbursements for the maintenance of the service were made from the central office.

It appears, however, that the late Inspector General administered the affairs of the service so economically that a goodly surplus was left at the expiration of each fiscal year. As the years passed this surplus increased and multiplied until now, as is understood, it amounts to over ₱1,000,000, and, instead of this sum being returned to the Chinese Government as unexpended appropriations, it is deposited to the credit of the service in a London bank. The exact amount of this surplus is not known, owing to the fact that its manipulation was under the personal direction of the Inspector General and does not appear in the annual reports, or statements prepared by the auditor of the service.

The question arises, whom does this surplus fund belong to? Members of the service say that as the moneys were originally appropriated for the payment of salaries, etc., Sir Robert Hart's economy deprived them of their rightful share, and therefore, the surplus accumulated belongs to the service and should be divided proportionately amongst its members.

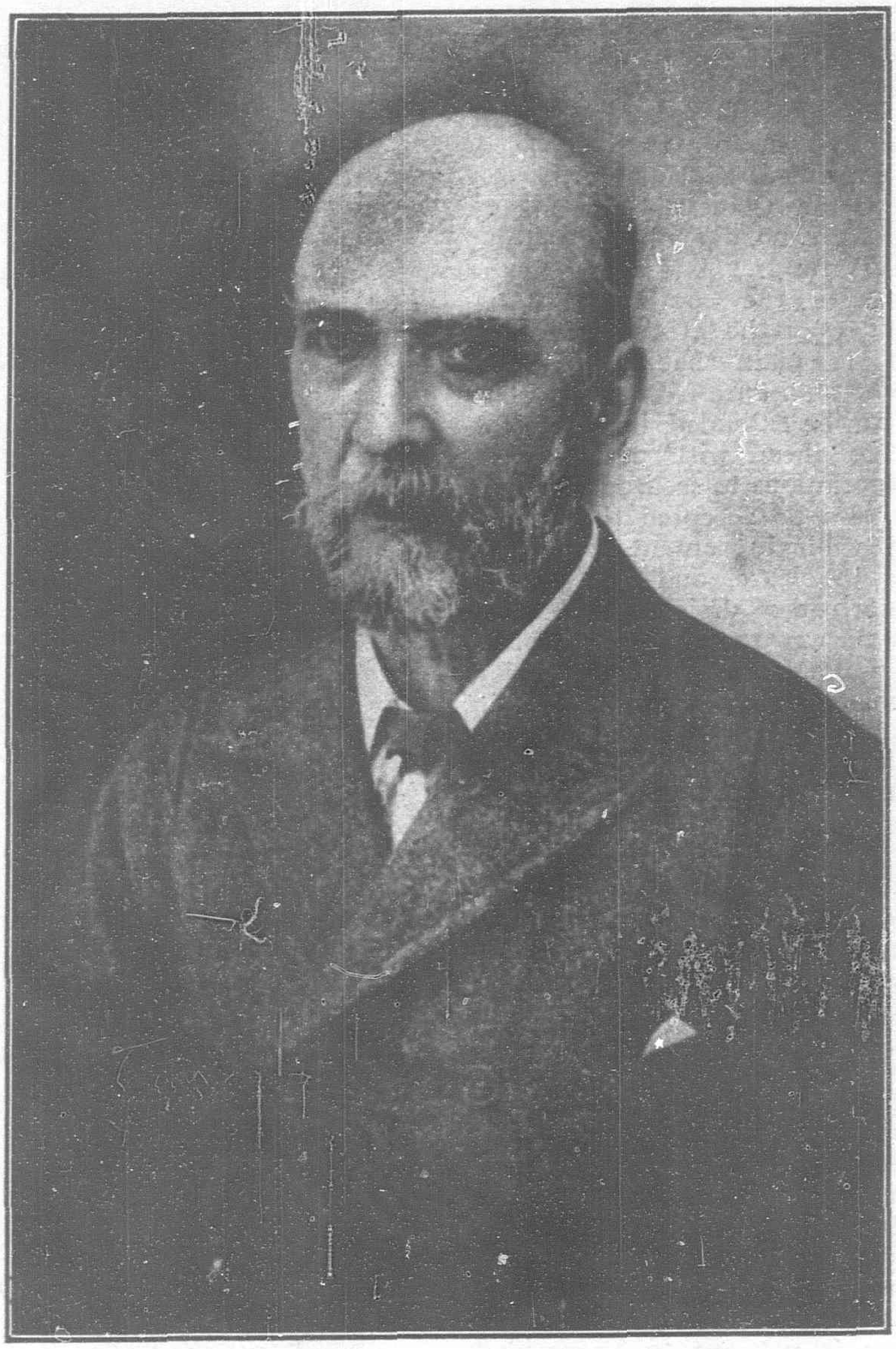
The Chinese Government, however, holds to the point that all unexpended appropriations revert to the Treasury at the expiration of the fiscal year, the same as in any other country. But the funds are deposited to the credit of the service in a foreign bank, and China, having no control over the service, cannot touch them.

When the British Government exacted from China the promise that so long as British trade predominates in China, the Inspector General should be a British subject, Great Britain became sponsor for the official holding that position. To safeguard British bondholders, Britain secured a lien on the post of Inspector General of Customs. Who is to safeguard China's interests, if a large unused balance is permitted to accumulate, and the sum withdrawn from her jurisdiction? Mr. Algen's course of action, as the duly accredited appointee of the British Government to administer China's customs, will be followed with great interest.

NEUTRALIZATION, EXTENSION, OR COERCION?

(Continued from page 1.)

So the situation to-day is that in 1934, twenty-four years hence, China may repurchase the line at its actual cost. But previous to this, in 1923, or thirteen years from date, the lease to the Liaotung peninsula, including the ports of Dalny and Port Arthur, expires. So half the life of this lease has already expired, and there is only twelve and a half years for it to run. As leases go, this is a comparatively short life, and unless it can be extended, or a promise exacted from China that she will agree to its extension in 1923, there is little inducement for Japan to embark on any grand scheme of development.



SIR ROBERT HART, BART.

The development of Manchurian trade arising out of the enormous expansion of the bean market is an unexpected factor in the situation which brings China face to face with a crisis years before she anticipated it would have to be met. The growth of the bean exports to Europe has been so rapid that the railway and the port facilities are inadequate to handle the traffic. Japan must double track the South Manchuria Railway for its entire length, quadruple its car capacity, and enlarge the ports of Dalny and Port Arthur, to insure a hold on her legitimate share of the traffic and prevent its diversion to Vladivostok. And the railway improvements will be of no avail, unless, at the same time, the port facilities are increased to enable steamers to carry away the cargo.

Dalny harbor will have to be deepened, new breakwaters and wharves constructed, and improvements on a grand scale carried out, to place it in a position to cope with the development of the province. The limited facilities of the port are already taxed to the utmost to handle the traffic, and, as a temporary relief, Japan has opened the naval base at Port Arthur to trade for the purpose of making use of this slight additional increase in docking and loading facilities. The capacity of the wharves at Dairen is now calculated at 9,000 tons per day, and with the completion of the East Wharf, it will be about 17,000 tons. But as half of the berths must be reserved for the smaller coast steamers the export capacity of the present improvements will be much reduced. It requires no great stretch of the imagination to foresee the day when the Manchurian trade through the port of Dalny will reach a total of 5,000,000 tons per year. The improvements in the Fushun collieries, bringing the daily output up to 5,000 tons per day, or 1,750,000 tons per annum, will be completed within a year or so, and the product of the Pensihu Yentai and other mines will bring this total up to 2,500,000 within the next five years. The growth of the bean and grain trade may be expected to divert some 2,000,000 tons through the same outlet in the same space of time, and if another 1,000,000 tons are added for sundry imports and exports, the 5,000,000 ton limit is not far off. This means that the docks must handle at least 14,000 tons of freight every day, without any allowance for delays or demurrage or the many set backs which always occur to prevent the working out of an ideal system. So it is safe to assume that the capacity of the docks must be greatly increased and the harbor extended to embrace such improvements as will double the present capacity.

The original Russian plans for the port of Dalny included the construction of five immense piers varying in width from 60 to 300 feet and from a quarter to half a mile in length, but only one of the piers and part of the second were actually completed before the war. Japan will be compelled to complete what the Russians initiated to keep pace with the growth and progress of the country.

But any elaborate scheme to provide ample facilities for the handling of the immense trade of Manchuria, ten years hence, requires an enormous outlay of capital. The improvement of Dalny harbor will entail the expenditure of many millions, and the natural question arises, where will Japan obtain the money, and on what security? The matter is one which admits of no delay; it must be faced and settled as soon as possible, or the railway will be the loser.

Harbor works or port bonds usually run for a long term of years with the receipts and wharf charges as security. When Japan turns to foreign bankers for a loan of several million sterling to be employed in the improvement of Port Arthur or Dalny, the first question will be "how about the lease?" European financiers, while entirely willing to advance funds for harbor improvements in the Leased Territory as long as Japan controls the property, would refuse to consider the proposition if China is to resume her authority in thirteen years. Terms, which might be granted to Japan, would not be extended to China.

It is safe to conclude that if Japan were to seek a loan to-day in the financial markets of the world for the improvement of Dalny, the embarrassing question relating to the life of the lease would be immediately raised. If Japan could give an assurance that the lease would be extended, backed up by the consent of the Chinese Government, she would have no difficulty in raising the necessary funds. And as the financial success of the South Manchuria Railway hinges on the terminal improvements, it is plain that Japan must receive some assurance from China that the lease will be extended, in order that she may go ahead with necessary financial negotiations to secure the funds.

It may also be accepted that China will never willingly consent to an extension of the lease, and will employ every subterfuge of diplomacy to delay giving an answer to Japan on such a vital question. Japan is in the position that she must know now, or at least in a year or so, whether China will consent to a renewal of the lease. This is vital to her interests. She must have China's official assurance, to be in a position to raise the funds necessary for the improvements at Dalny and Port Arthur.

A clash is inevitable. China will refuse and Japan must insist. Japan may agree to confine the lease extension to the ports and permit China to re-establish her authority over the rest of the peninsula. At all events a crisis will arise. Japan must be able to produce China's consent to the extension to secure funds for urgent improvements. In the event of China's emphatic refusal to consider the question, Japan will be blocked and baulked in her purpose. Will she accept such an answer as final, or will she resort to coercion?

The issue is not one to be decided twelve years hence: the solution must come now. It is the question of the day between the two nations.

In view of this situation, which might readily lead to serious complications between the two empires, and the effect it might have on other interests in the East, the proposal of the American Secretary of State to neutralize the Manchurian railways is not so much of a diplomatic blunder after all, nor does it have that air of grandiose simplicity that some people profess to see in it.

G. B. R.

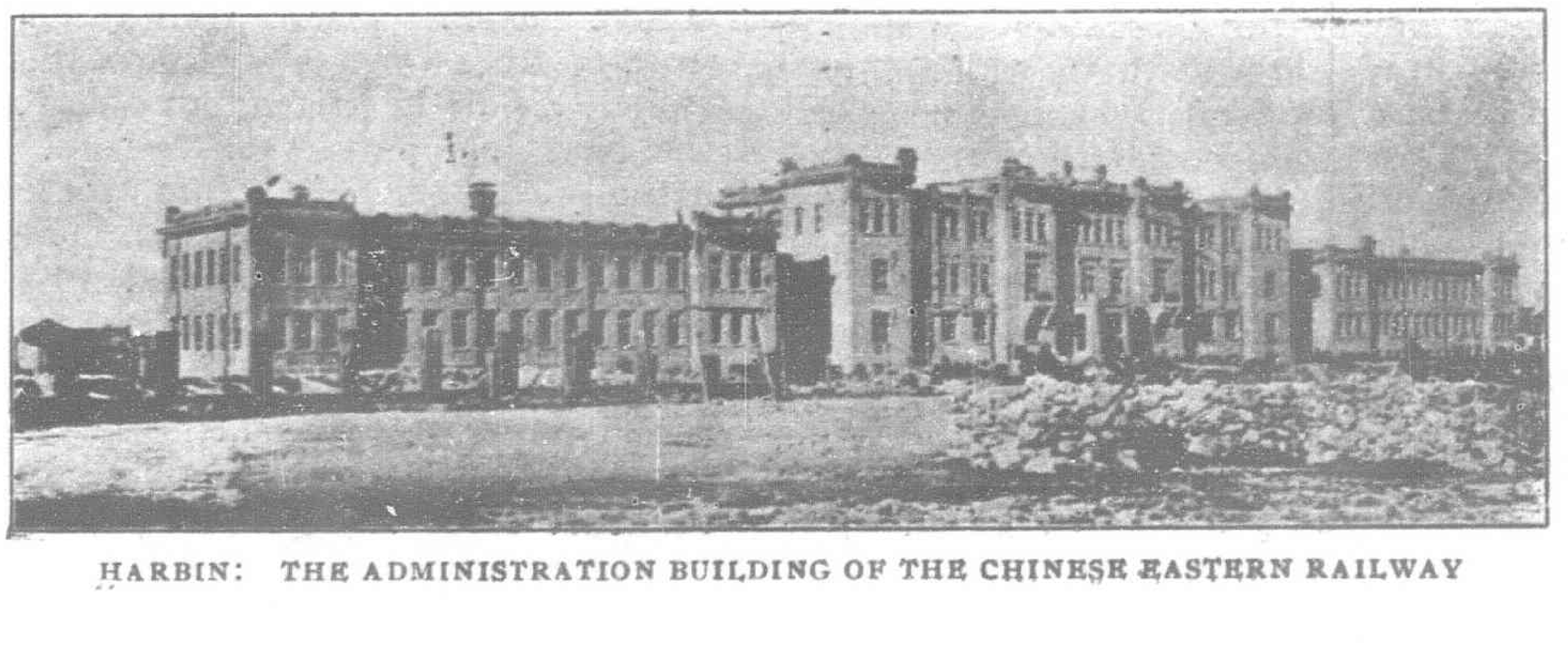
THE CHINESE EASTERN RAILWAY

The following article from the *China Tribune*, a Japanese weekly published at Tientsin, sheds some further light on the leasing of Kwantung and the history of the financial affairs of the Chinese Eastern Railway:

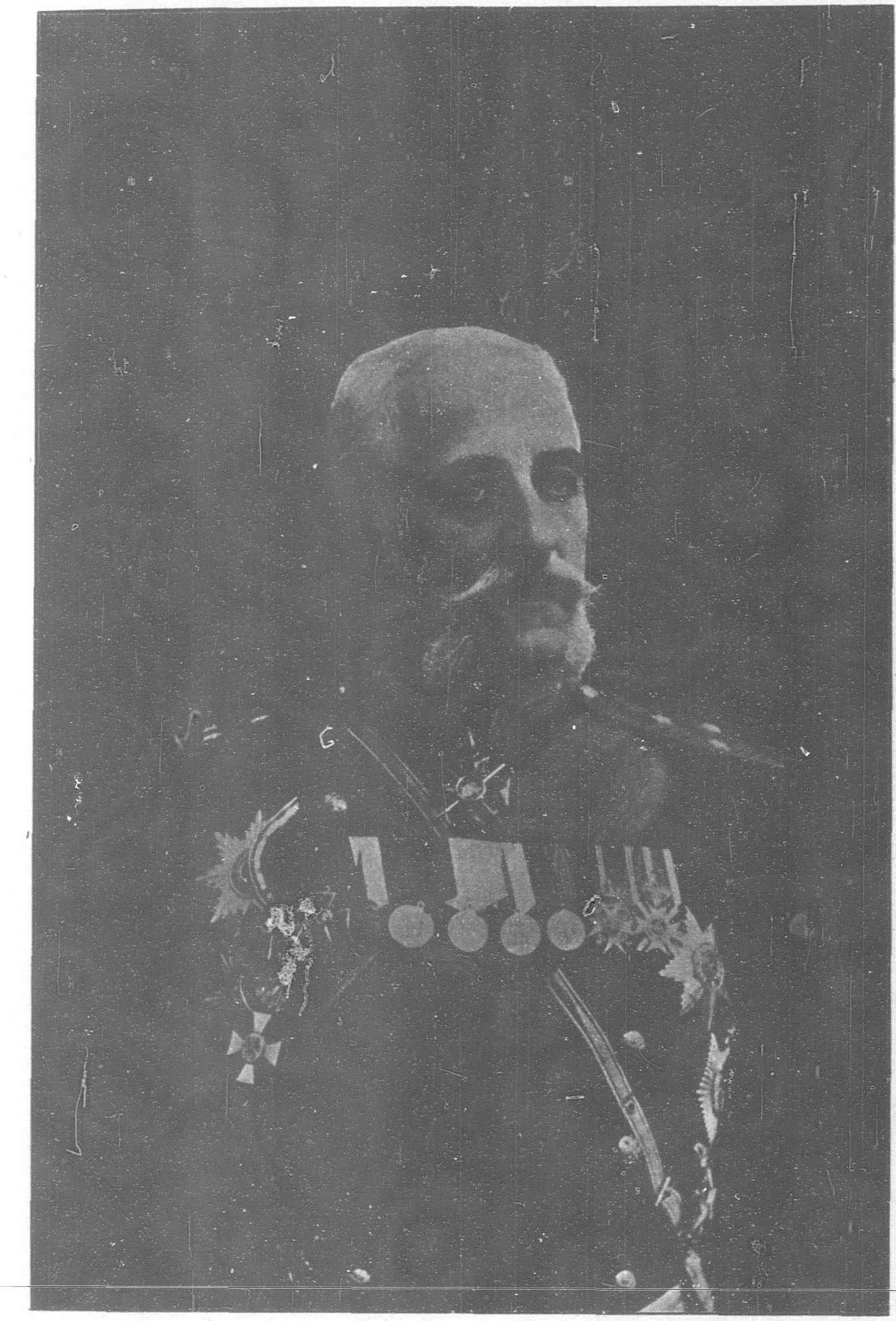
"In 1896, Earl Li proceeded to Moscow for the purpose of assisting in the coronation ceremony of the Czar. Count Witte, who was waiting for the opportunity to obtain a remuneration from China for the services rendered by Russia in forcing Japan to return to China Liaotung Peninsula, skilfully managed to conclude a secret agreement with Li. Accordingly on August 27th, the same year, the contract concerning the establishment of the Chinese Eastern Railway Company, that is the Agreement to construct the said railway, was concluded between the Chinese Representative Hsu Ching Chen and the Representative of the Russo-Chinese Bank, to connect Chita on the Trans-Baikal Line with the Usuri Railway.

MAJOR GENERAL HOVARTH

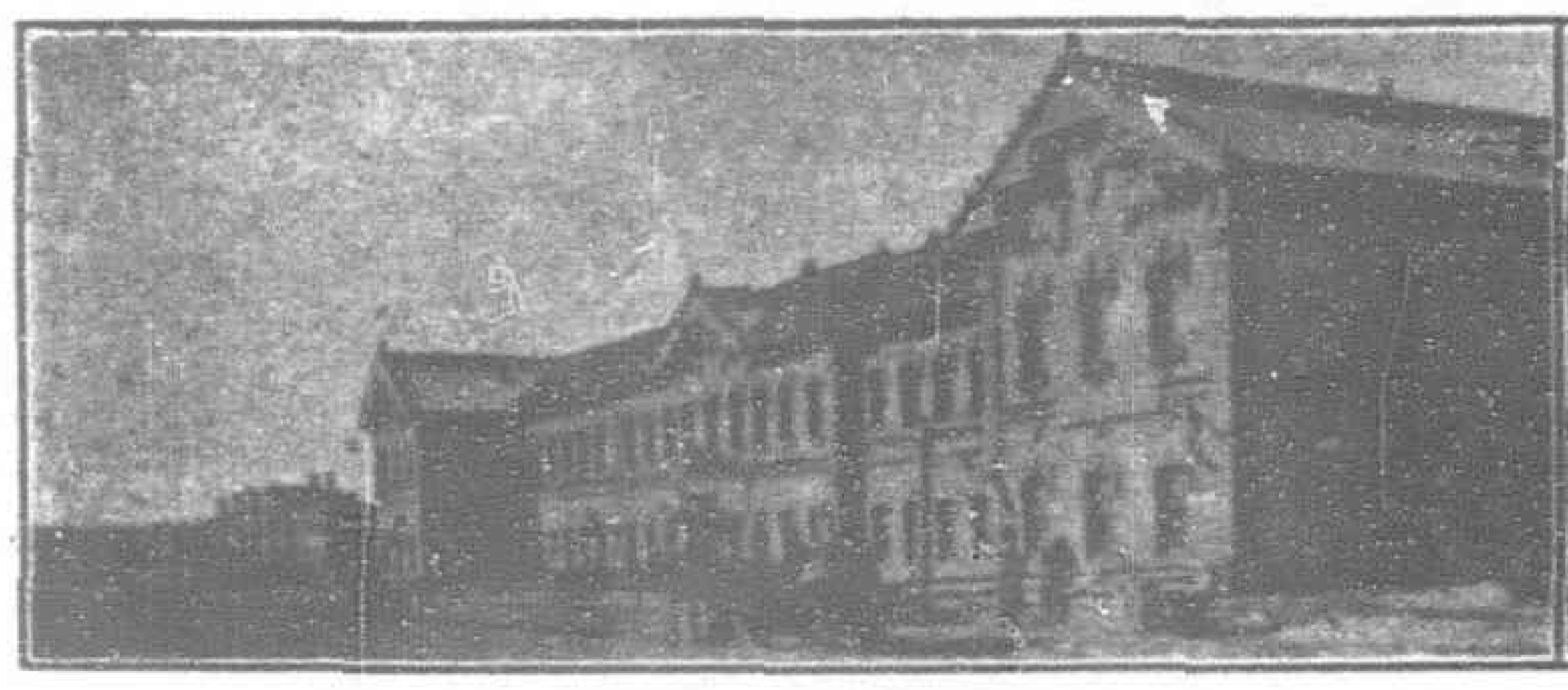
CHIEF OF STAFF AND MANAGING DIRECTOR OF THE CHINESE EASTERN RAILWAY
THE DOMINANT FIGURE IN HARBIN



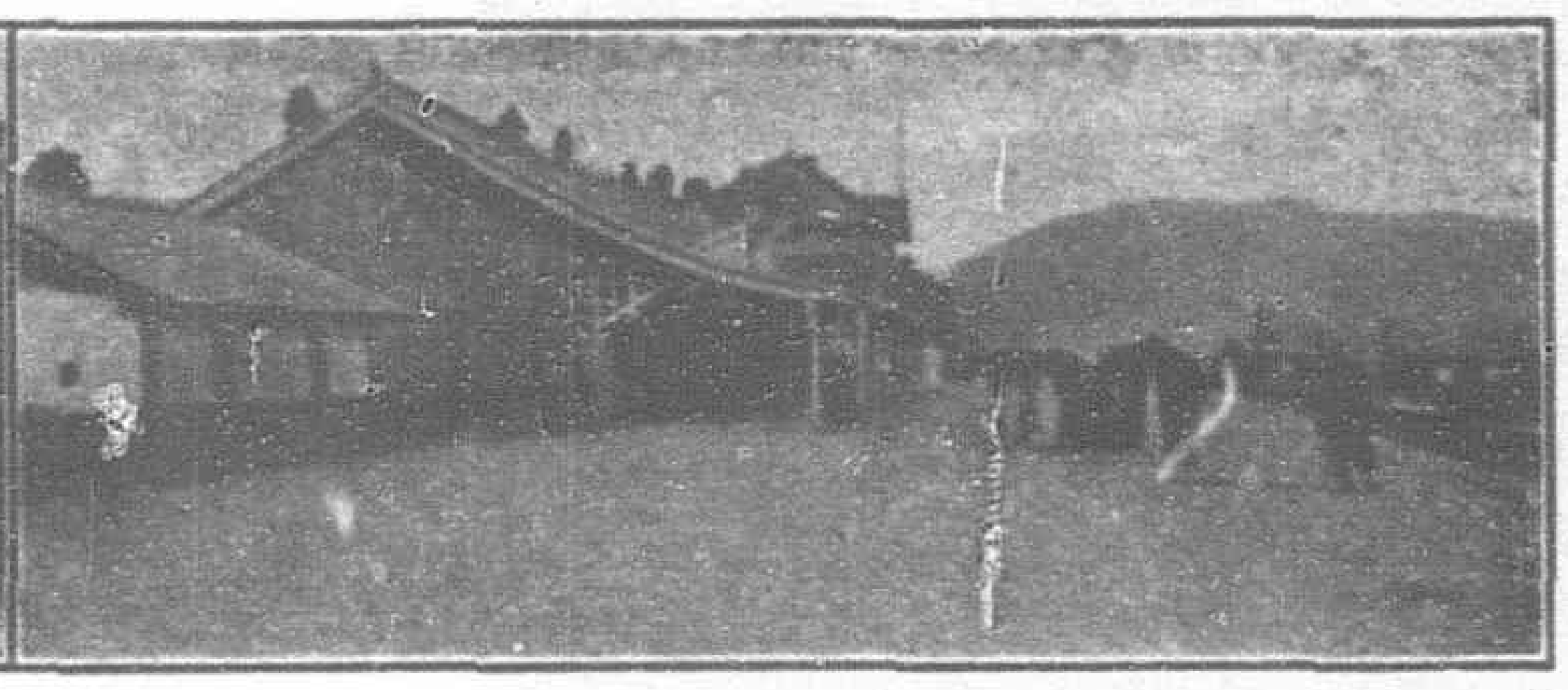
HARBIN: THE ADMINISTRATION BUILDING OF THE CHINESE EASTERN RAILWAY



LIEUT. GENERAL TSCHITAGOFF
IN COMMAND OF THE RUSSIAN RAILWAY GUARDS IN MANCHURIA

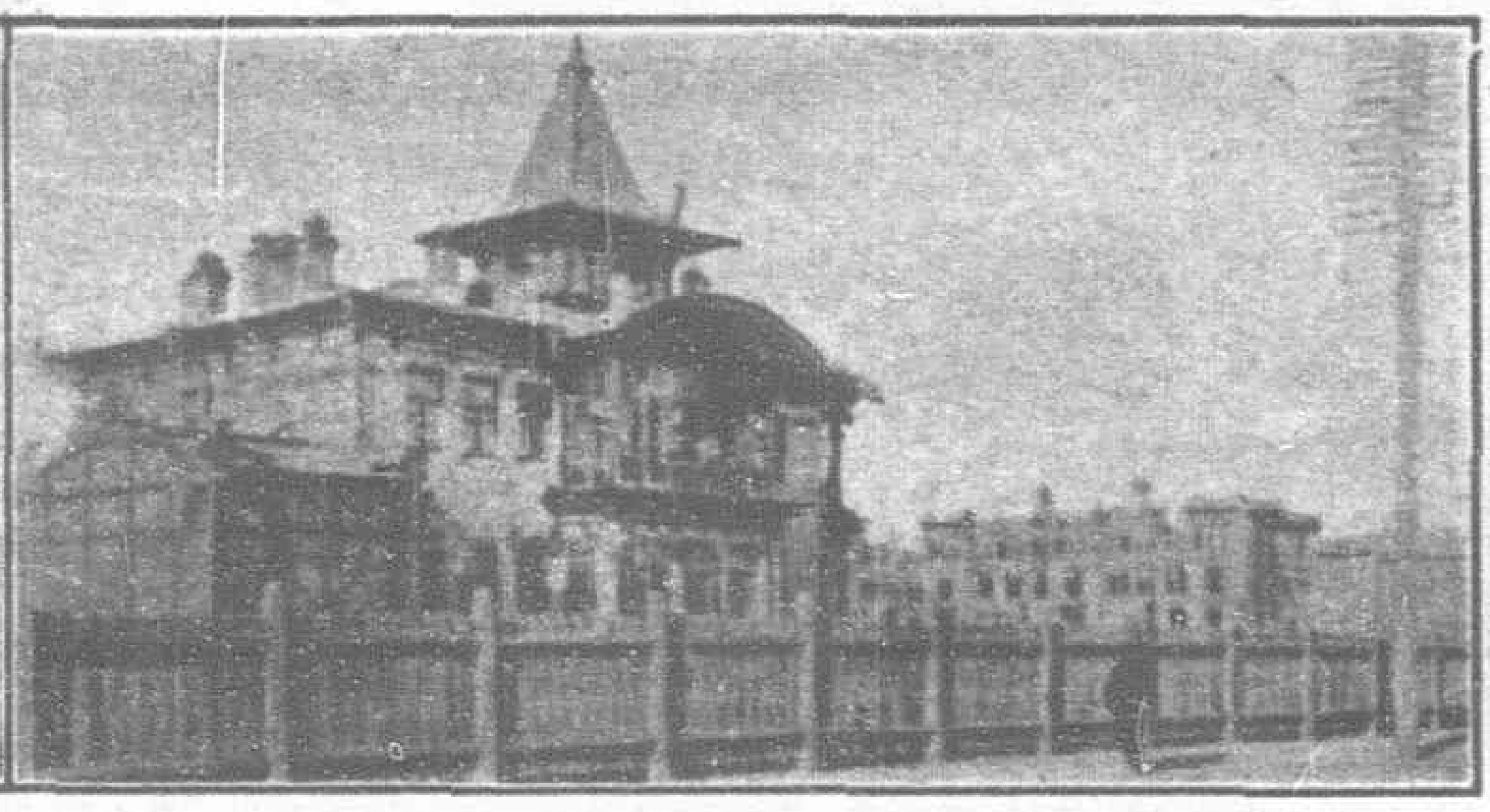


HARBIN: HEADQUARTERS OF GENERAL STAFF FOR TRANS-AMUR DISTRICT



C. E. RY. STATION AT IMJANPO

HARBIN: CONSULATE GENERAL OF RUSSIA



HARBIN: OFFICIAL RESIDENCE

"In March, 1898, a part of the Russian Pacific Squadron, under the command of Admiral Dovbasoff, entered Port Arthur and hoisted the Russian flag upon the hill at the harbour entrance. On the 15th, Russia forced China to sign the Treaty of Leasing the Kuantung Territory, and even secured, on June 24th, the concession to build a railway line across South Manchuria. In 1899, the Regulations of the Chinese Eastern Railway Co. were sanctioned by the Russian Government, and through the above mentioned agreement of the leased territory, guaranteed by the Russian Minister of Finance, a railway extending for 1,600 miles from Manchuria in the north to Tairen and Port Arthur in the south and Pogranichinaya in the east was built by Russians through the Eastern Provinces of China.

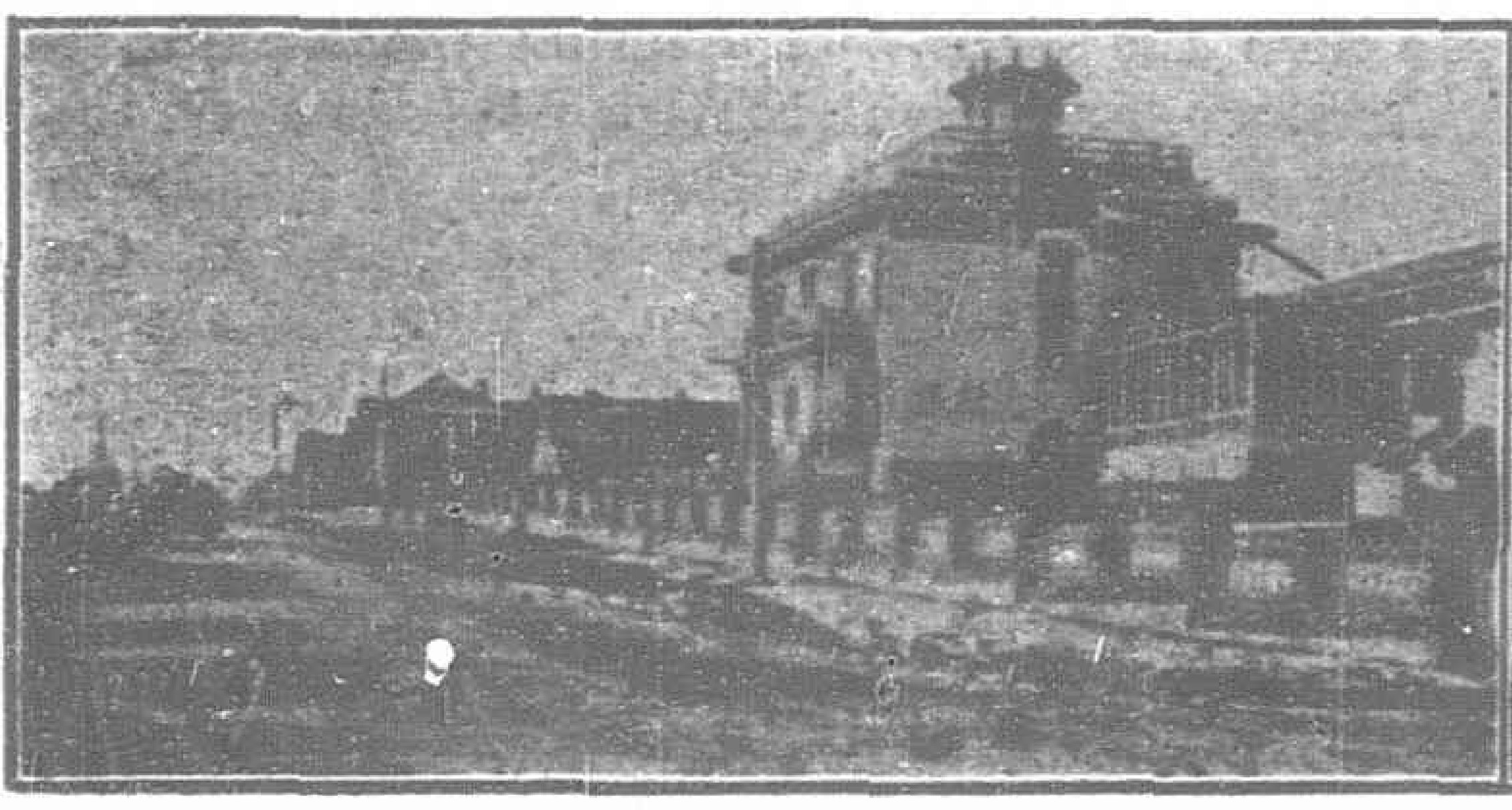
"In 1904, no sooner had the Eastern Railway been completed, the unfortunate war broke out between Russia and Japan, and as the result of the Portsmouth Treaty, the company lost the line southward from Kuanchengtze. In the autumn of 1906, the Usuri line, owned by the Russian Government, together with the railway running to the Sucheng Colliery, was let to the Chinese Eastern Railway Co. for a term of 25 years.

"Although the Chinese Eastern Railway Co. is legally a private corporation, in reality the railway is managed by the Russian Government. As it is, the capital is furnished from the National Treasury, and the line controlled by the Minister of Finance, receiving a large sum of money as subsidy from the Government every year. Unlike other government lines, however, the Chinese Eastern Railway does not receive any command from or intervention of the Minister of Communications, nor it is under the superintendence of the Board of Audit. Its management is left in the hands of the Head Office of the Railway Company at St. Petersburg, and its finance is controlled by the Minister of Finance through a special organ Audit Bureau of the Chinese Eastern Railway. In other words, the line is nothing but 'an enterprise undertaken by the Russian Minister of Finance, maintained in Chinese territory with the money disbursed from the National Treasury of Russia.'

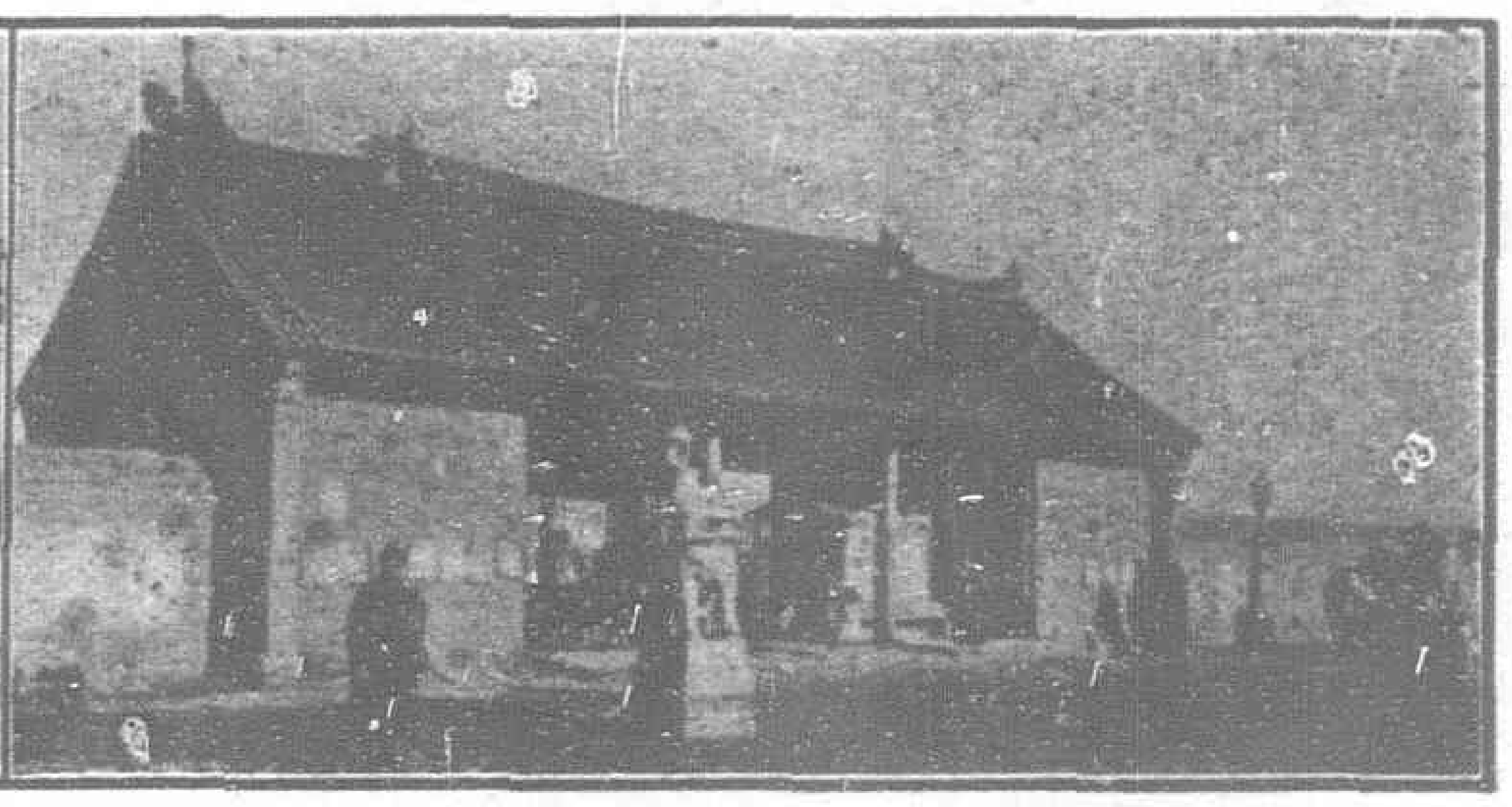
"How much money did Russia spend for the construction and management of the Chinese Eastern Railway? We saw elsewhere stated that the sum paid out by the Russian Government amounts to four hundred million roubles, but accurate investigation reveals the fact that the sum expended for the railway really aggregatesthe fabulous amount of six hundred and sixty two million roubles in round figures, consisting of the following items:

1.	Unguaranteed Capital...Rbls.	5,000,000
2.	Bonds with the Guaranteed Interest of 4% (subscribed in 1897)................	15,000,000
3.	Bonds with 4% interest (subscribed in 1898-1904)......	351,000,000
4.	Interest at the time of construction, added to the capital..................	23,275,604
5.	Interest on the above........	5,369,210
6.	Amount paid out during the Campaign, until 1909.......	98,451,000
7.	Damages incurred at the time of the Boxer Trouble........	65,970,000
8.	Subsidies from 1906 till 1910..	97,351,000
	Total...............Rbls.	662,398,159

"Of the above, the fifteen million roubles mentioned in the Item Second were borrowed from the Russo-Chinese Bank. For the repayment of the same and the interest, 625,388 roubles are put down in the annual estimate. For the redemption of the bonds mentioned in the Item Third and the payment of the interest are stipulated by the Edict dated December 17th, 1901, but the amount to be thus paid out is not entered in the estimate, it being debited as a loan of the railway company against the National Treasury. If the company is unable to pay the capital and interest for the same, the National Treasury will pay 6% interest on it. The Items 4th and 5th are same as the 3rd, while the 6th, 7th, and 8th, bear no interest.



HARBIN: RESIDENCE OF LIEUT. GENERAL TSCHITAGOFF



HARBIN: KIRIN PROVINCIAL BUREAU, YAMEN OF TAOTAI SZE

H. E. SHIH SAO CHI

CUSTOMS TAOTAI AND CHIEF CHINESE AUTHORITY AT HARBIN.—GRADUATE OF CORNELL, 1901

"In five years, from 1906 to 1910, the amount the Russian Government disbursed (the amount for 1910 being the estimate) as subsidy for the Chinese Eastern Railway totalled ninety seven million roubles as previously stated. The following shows the annual disbursement in round figures: 1906, Rbls. 17,407,000; 1907, Rbls. 25,170,000; 1908, Rbls. 22,649,000; 1909, Rbls. 17,578,000; 1910, Rbls. 14,547,000, average per year being 19,472,000 roubles.

"It will be noticed that since 1907, the amount was gradually reduced, but still 14 million roubles are reckoned on during the current year, making the average annual expenditure in the last five years over 19 million. This expresses without saying much what a heavy burden the Russian Government is bearing on account of the Chinese Eastern Railway.

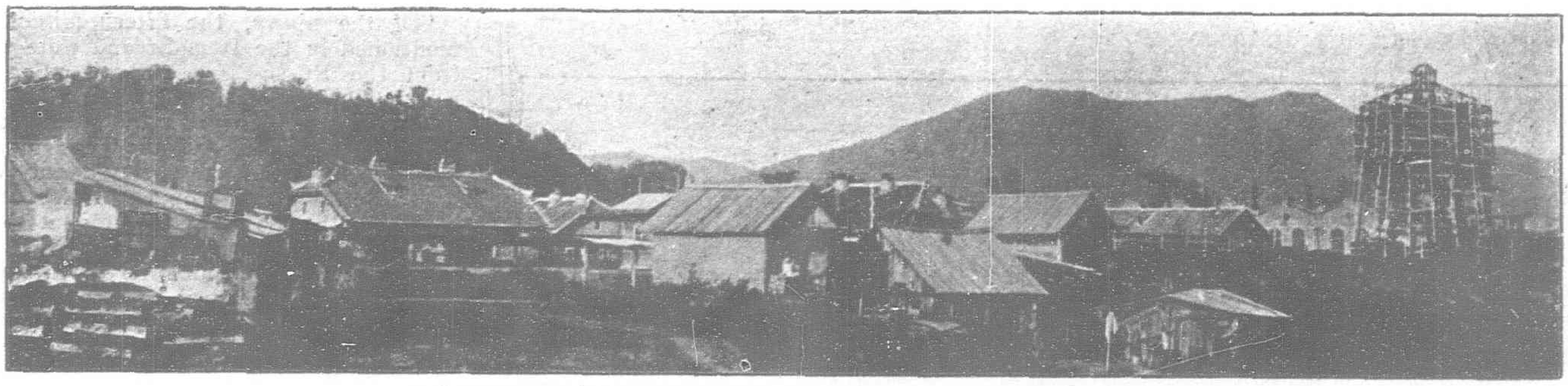
"When Russia built the Chinese Eastern Railway, which was commenced in 1898 and completed in 1903 spending four hundred million roubles, she was instigated by a certain ambition for political as well as economical matters in the Far East. The sum of about one hundred million roubles that she spent from 1904 to 1905 was for the transportation of troops and provisions in her supreme effort to crush down Japan during the disastrous campaign. But what object has the Government in having paid out 97 million roubles in subsidy in the last five years? What is she aiming at?

"The explanation is best furnished by the speech of Mr. Kokovtzoff at the Moscow Chamber of Commerce on his way to the Far East, last autumn. He stated, 'There was a time when the Chinese Eastern Railway was managed for political as well as commercial purposes, but at present there is only one object, commerce, for which we should work. To be more minute, (1) the Government intends to make the railway to serve as an organ of shipping Russian goods into North Manchuria, (2) to facilitate the transportation of Russian goods to Russian territories in the Far East and make the freight rate as cheap as possible, (3) to do its utmost for the importation of materials produced in China, which can be worked into marketable articles by Russian labour, and (4) to invite Chinese goods to be exported abroad to Vladivostock, so long as it does not harm Russia's interest.'

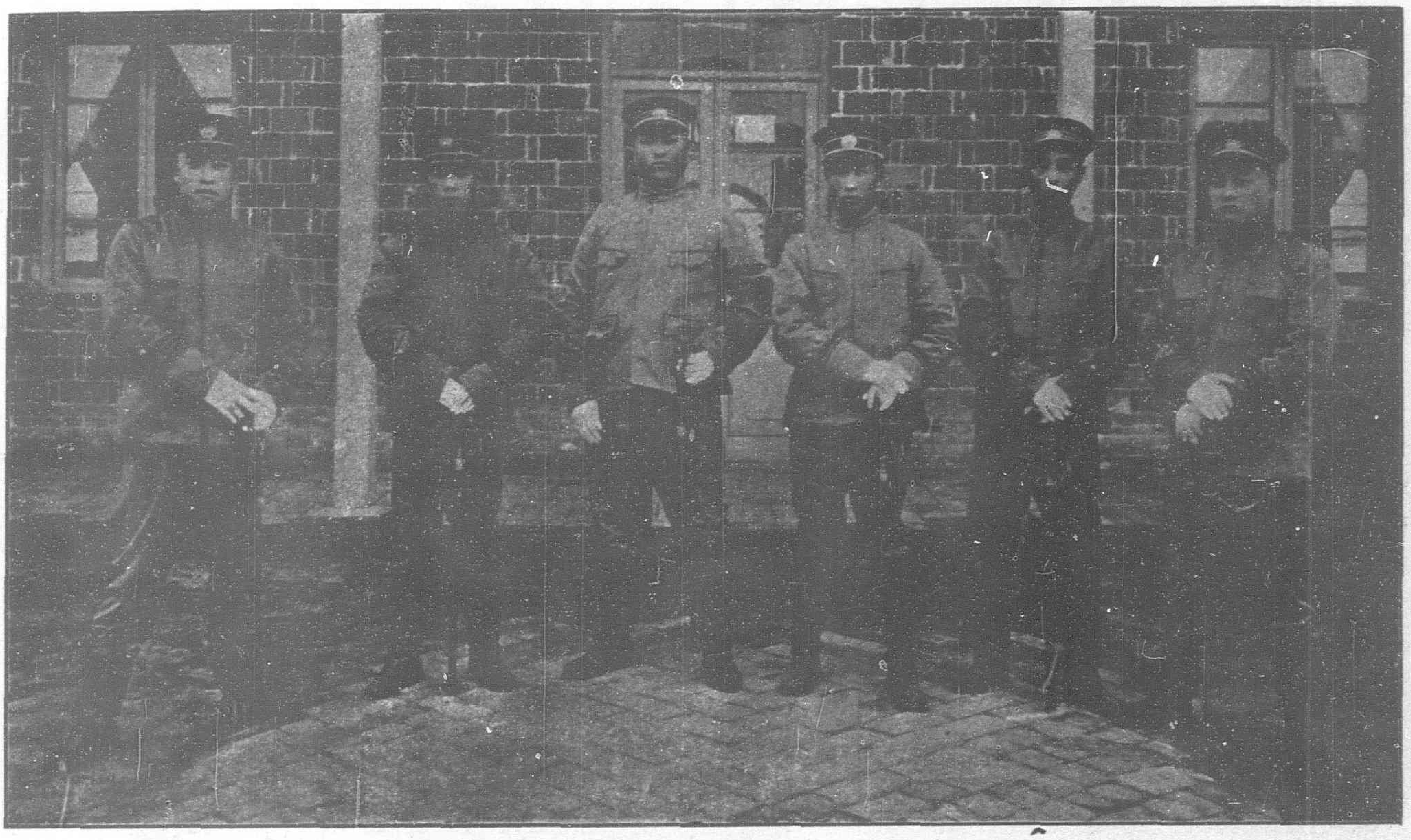
"No other object of running the Chinese Eastern Railway can exist beyond what the Minister specified; it is impossible to expect of this railroad anything which is outside of the commercial purpose. But when the fact that the railway company is losing 19 million roubles every year is observed, the actual condition of running it appears to be not in consonance with its object. Is this through unskilful management, or is it through the position of the railway being commercially disadvantageous?

"Let us first see how the railway company is managed. In doing so, it is necessary for us to examine the estimate of last year, before we proceed any farther.

"The main office of the Chinese Eastern Railway is at St. Petersburg, while the branch office is established at Harbin. The former is directly controlled by the Minister of Finance, and has about 300 assistants. Important questions are decided by the Directors, who



A TYPICAL STATION ON THE CHINESE EASTERN RAILWAY



OFFICERS OF THE MODERN DRILLED MANCHURIAN ARMY

number over 10. The Branch Office engages in transacting the actual business of railway administration under the instructions of the Head Office. Gen. Holwatt and about 2,000 officials compose the staff.

"The organization of both offices is similar to each other, but their authorities are widely different, the Branch Office having almost no power to carry out things without the instructions of the Main Office. But the latter, being established in a far-off place from the district where the railway exists, is not familiar with the actual conditions obtaining, and, therefore, the decision of the Directors is often found to be contrary to the actual interest of the railway. On the other hand, the Branch Office, being hampered by the Head Office, is unable to display enough activity. Thus, views are frequently expressed of late to remove the Main Office to Harbin as to be able to do away with the existing evils."

	Roubles.
1. Expenses at the Main Office, St. Petersburg	1,811,281
2. Expenses at the Branch Office, Harbin	1,837,337
3. Expenses for running goods and passenger cars	1,110,000
4. Expenses for Schools attached to the Railway	26,555
5. Expenses for Garrison Troops	9,828,000
6. Expenses for Civil Administration	1,522,260
7. Expenses for Courts	98,933
8. Expenses for Land Office	200,601
9. Expenses for Negotiation Bureau	231,668
10. Expenses for the Bureau of Line Preservation	3,621,037
11. Expenses for the Traffic Bureau	2,889,087
12. Expenses for the Bureau of Rolling Stocks	6,679,227
13. Miscellaneous Expenses	907,325
Total	30,763,011

H. E. CHENG-SHUN, DEPUTY MILITARY LIEUT.-GOVERNOR OF KIRIN

H. E. HSU SHIH-CHANG

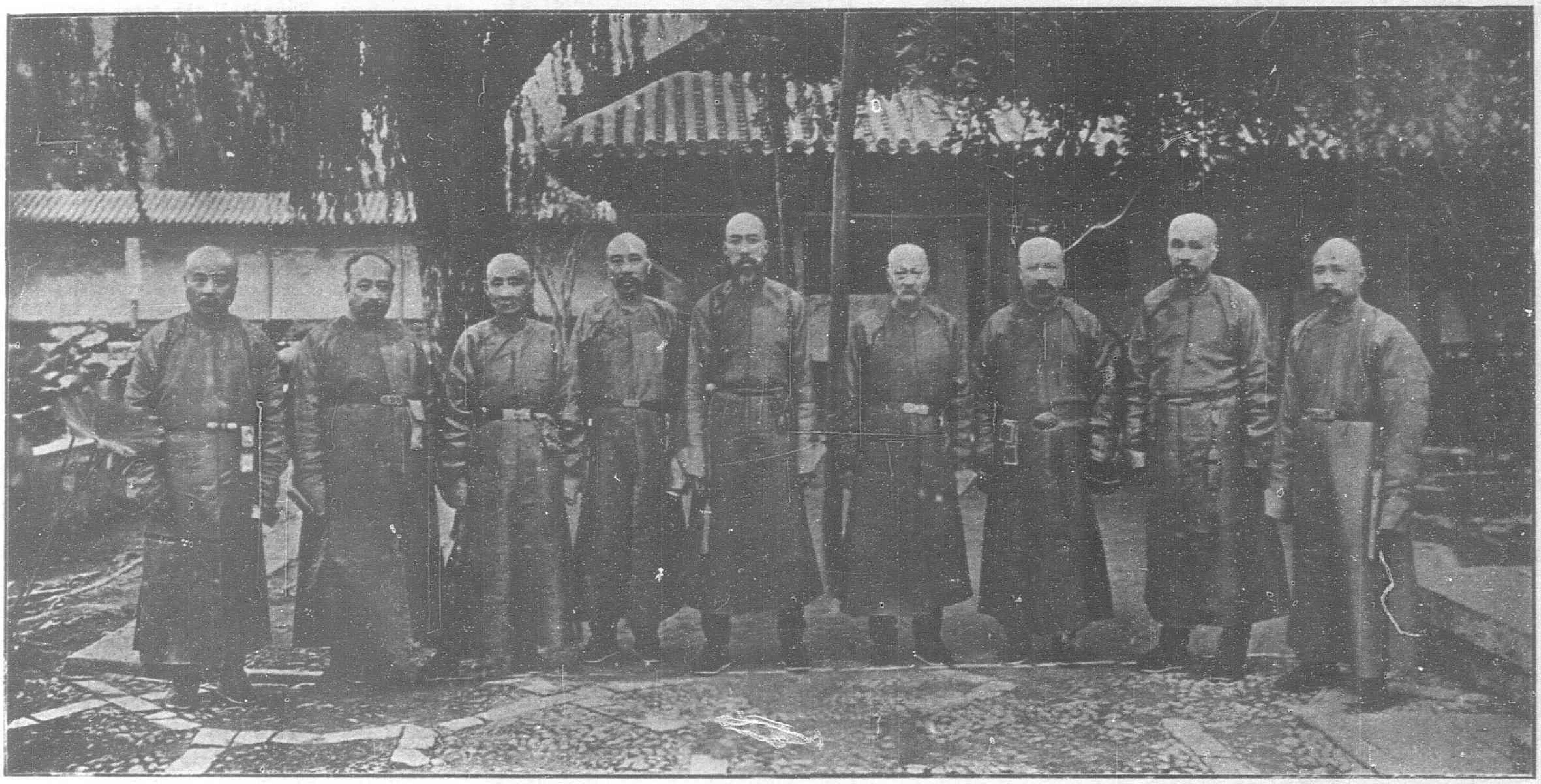
FORMER VICEROY OF MANCHURIA IN THE UNIFORM OF COMMANDER-IN-CHIEF OF THE MANCHURIAN ARMY

H. E. CHAO EHR-HSUN

FORMER TARTAR GENERAL OF THE THREE EASTERN PROVINCES (MANCHURIA), NOW VICEROY OF SZECHUAN

RAILWAY STRATEGY IN CHINA.

THE KAIFENGFU-HAICHOW LINE



H. E SUN PAO CHI, GOVERNOR OF SHANTUNG (IN CENTER), AND THE LEADING PROVINCIAL AUTHORITIES

Shanghai, May 1st, 1910.—The Railway and Mining Concession exacted by Germany in her Kiaochow Convention with China stipulates in Article 1:—

"The Chinese Government sanctions the construction by Germany of two lines of railway in Shantung. The first will run from Kiaochow and Tsinanfu to the boundary of Shantung province via Wei-Hsien. Tsinchow, Pashan, Tsechuen and Suiping. The second line will connect Kiaochow with Chinchow, whence an extension will be constructed to Tsinan through Laiwu-hsien. The construction of this extension shall not be begun until the first part of the line, the main line, is completed, in order to give the Chinese an opportunity of connecting this line in the most advantageous manner with their own railway system. What places the line from Tsinan-fu to the provincial boundary shall take in enroute is to be determined hereafter."

In Article 4 it is also stipulated that "if at any time the Chinese should form schemes for the development of Shantung, for the execution of which it is necessary to obtain foreign capital, the Chinese Government, or whatever Chinese may be interested in such schemes, shall, in the first instance, apply to German capitalists. Application shall also be made to German manufacturers for the necessary machinery and materials before the manufacturers of any other Power are approached."

German railway rights in China, as defined by the Kiaochow Convention, thus include the road between Tsingtau and the provincial capital at Tsinanfu, and another line from Kiaochow to the boundary via Ychowfu, and thence northwards via Laiwu-hsien to Tsinanfu making a complete triangle in the preferred sphere. The line from Tsingtau to Tsinanfu has been built and is operating successfully, and the inner leg of the triangle is under construction, forming part of the German section of the Tientsin-Pukow railway. The outer line from Kiaochow to Yhsien has been surveyed, and estimates of construction prepared, but no work has yet been attempted, and the right to construct it is held for some future date, when conditions are more favorable. Although the Kiaochow Convention granted to Germany the right to the line from Tsinanfu to Yhsien or Chiningfu to be constructed with her own capital and operated as a German line, this concession was subsequently waived in the negotiations leading up to the signing of the Tientsin-Pukow Railway Loan Agreement. In order to secure the Chinese Government's guarantee to the Loan, the German bankers surrendered to China their rights to own and operate the line.

German authorities unite in predicting a great future for their port of Tsingtau, as with the construction of new lines extending beyond Tsinanfu into the interior, trade will be attracted to the port, which in time, it is hoped, will prove a formidable rival to Tientsin and Hankow. To bring this about, the Germans have advocated the construction of two important railways, and have used their best endeavors with the Chinese government to grant them the concession. A link connecting the terminus of the Shantung Railway at Tsinanfu with some point on the Peking-Hankow line would prove of immense commercial value to the development of Tsingtau, and a line from Tehchow, in northwestern Shantung, to Chentingfu on the Pekin-Hankow line, has been recommended by Germany. This would place Tsingtau in a position to rival Tientsin as the port for the immense districts of Shansi and southern Chihli, and owing to the fact that Tientsin is ice-bound for 4 months of the year, it would enable the German port to make a direct bid for the trade of the country even up to Peking and beyond.

The German program also includes the construction of another similar line parting from the Tientsin-Pukow railway, somewhere in southwestern Shantung, probably at Yengchow, passing through Tsining on the Grand Canal, and Tsaochowfu to Kaifengfu, the capital city of Honan province. Here it would connect with the existing Peinlo or Kaifengfu-Honanfu Railway, which is to be extended westwards via Tungkwan to Sianfu, from whence at some future date will start the important Trans-Asian line via Lanchowfu to Ili and Kashgar. This would divert to Tsingtau the trade of Central China and especially the coal export traffic of Shansi. Either of these projects would materially increase the prosperity of the German Shantung Railway and develop the port of Tsingtau. So Germany is looking far into the future, and in building the Shantung Railway, the road bed was made wide enough for doubletracks, although only a single line is now operated.

To the many overtures on the part of Germany to build these two important links, China has responded in the negative, but has promised that if foreign capital is called on China will apply to Germany for the loan. So while the concession is withheld, these projects may be considered as coming within the sphere of future German railway loans in China. With the German position in relation to railway development in this section clearly outlined, we may now turn to another phase of the situation which also has an equally important bearing on the railway problem of Central China.

The original mining concession of the Pekin Syndicate, in Clause 17, stipulates:—

"Whenever it may be necessary for any mine to make roads, build bridges, open or deepen rivers or canals, or construct branch railways to connect with main lines or with water navigation to facilitate transport of Shansi coal, iron and all other mineral products from the province, the Syndicate on reporting to the Government of Shansi is authorized to proceed with the works, using its own capital without asking for Government funds.

This clause was held on the part of the Peking Syndicate to cede to them the right to build a railway from the mines in Shansi, to tidewater. Their original scheme was to strike southwards towards Siangyang situated at the head of navigation on the Han River, thus finding a short outlet to the Yangtsze, but this was finally abandoned in favor of a route from the mines across 350 miles of country to the Yangtsze at Pukow. Their somewhat indefinite railway rights, which have been recognized by the Chinese Government, were afterwards merged with the concessions of the British and Chinese Corpora-

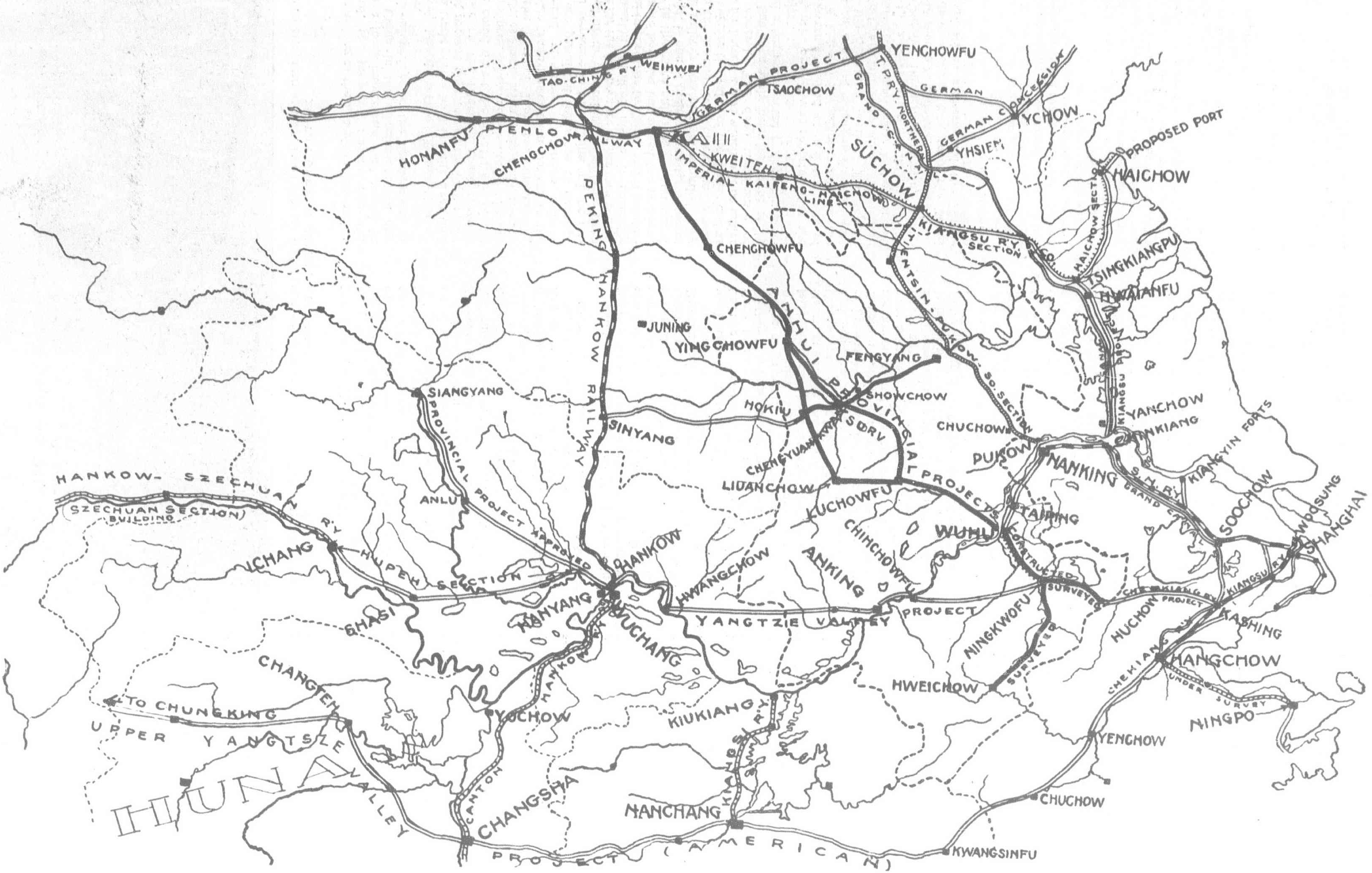
HIS EXCELLENCY, SUN PAO-CHI, GOVERNOR OF SHANTUNG PROVINCE; MINISTER TO FRANCE, 1902; CHIEF SECRETARY OF THE GOVERNMENT COUNCIL, 1906; GOVERNOR OF PEKING, AUTUMN, 1906; MINISTER TO GERMANY, 1907; PROMOTED TO PRESENT POST 1909.

tion, which comprised the southern half of the Tientsin-Pukow Railway and a future line from Pukow to Singyang on the Peking-Hankow line. While the plan of the Peking Syndicate to build a road from the mines to Pukow has been abandoned owing to the combination with the British and Chinese Corporation, the route has been modified to join the Tientsin-Pukow railway at some point further north No definite information on this subject is available, but in order to avoid a conflict with the established rights of the British and Chinese Corporation it is probable the Peking Syndicate claim will embrace a route from the mines terminating at some point on the Tientsin-Pukow Line, further north than the Pukow-Singyang project. Such a line would, therefore, pass through Kaifengfu and join the Tientsin-Pukow Line at Suchowfu or Suchowan. As the Pekin Syndicate still holds these railway rights as a valuable asset, it can be readily recognized that their sclaim must be clearly faced by the Chinese Government at some future date. The extension of the existing Pekin-Syndicate or Tao-Ching Railway, through Kaifengfu to any point on the British section of the Tientsin-Pukow line, would tend to divert the traffic of Honan and Shansi to the deep water outlet at Pukow. Such a line must materially weaken the value of the Pukow-Singyang concession held by the same syndicate. The success of the German program is undoubtedly the greatest menace to the profitable operation of these British lines, as the Kaifeng-Yengchow extension would place Tsingtau in a most favorable position to compete with them for traffic in the same districts. So it is clear that the questions involved in any railway extensions, connecting the Peking-Hankow and Tientsin-Pukow trunk lines, are vastly important to British and German interests. The future of Tsingtau as a great port hinges on whether Germany can secure a western extension to her railways in Shantung, and the rights of the Pekin Syndicate and the British and Chinese Corporation are affected by any move tending to favor the German program

China undoubtedly appreciates the situation and is determined to avoid future complications. First and foremost her own interests demand attention, and the question of an open port on the North China coast under her exclusive administration is a paramount issue with her government. For it is a significant fact that China has been deprived of all the valuable ports situated on the northern stretch of her coast. Shanghai, the great commercial center of the Empire, is ruled by an International Council, and the central government has no control over its affairs. Tsingtau is held by Germany, Weihaiwei by Great Britain, Dairen and Port Arthur by Japan; this leaves to China the outlets at Newchwang, Tientsin and Chefoo. Newchwang as a port is worthless. Eighty years ago the spot on which Yinkow now stands was at the bottom of the sea, and it is now twenty miles inland from the mouth of the Liao River. The encroachment of the land on the Liao-Gulf is going on so rapidly that any port at the mouth of a river can never be depended on as a permanent outlet for trade. In addition, the Liao River at Newchwang is frozen over for at least four months of the year, and all commerce is checked until the thaw, and then only shallow draft coasting vessels can reach the town.

Chinwangtao is an artificial ice free port owned and operated by the Chinese Engineering & Mining Company. Tientsin which ought to be the great port for North China is handicapped by the same disadvantages as Newchwang, and any scheme of improvement embracing a large expenditure is only a waste of money. The silt carried down by the Haiho is so great that constant dredging is necessary to keep a channel open for light draft steamers. Large vessels have to lie off shore as far as nine to ten miles, so Tientsin as a port can never figure in any important scheme for the development of the Empire, or the advancement of a national policy.

There remains Chefoo which might be made a great Chinese port, but while the depth of water is ample, the harbor is open to the heavy northern gales, and a breakwater is imperative to make it safe for vessels during the winter season. But at the best, even after a large expenditure of money on improvement schemes, the harbor of Chefoo could only accommodate a very limited number of vessels. Chefoo's prominence as a port has rapidly declined since the opening of Tsingtau and the construction of the Shantung Railway. The trade of the province, which once flowed through Chefoo, has been diverted to Tsingtau, and the only hope of the port is the building of a railway which will terminate at some point on the existing Shantung Railway. It is quite clear that such a road would menace the prosperity of Tsingtau, and diminish the through traffic of the German line, and as it conflicts with German interests, must meet with their disapproval. Chinese promoters have several times endeavored to raise the funds to construct this line from Chefoo to Wei-hsien, but up to date have been unsuccessful. Under the terms of the Kiaochow Convention, if the Chinese desire foreign capital to develop the province, they must turn to Germany, and in view of the menace to her own interests, it is quite natural that she would withhold financial assistance to such a scheme. While the Chinese are free to apply elsewhere for aid in the event of German refusal, such action on their part would undoubtedly result in complications. The Chinese have gone so far as to openly state that German officials are decidedly opposed to the construction of this line and have threatened to use their power at Peking to break any official who encourages the scheme. This statement, however, is apparently without foundation, and must be accepted for what it is worth. The real difficulty in the execution of the scheme is the failure on the part of the Chinese to raise the funds themselves. At all events, Chefoo could never enter into any plan of the Chinese Government of building up a port under its own



RAILWAY MAP ILLUSTRATING RAILWAY STRATEGY IN CHINA.

GOVERNOR SEM PAO-CHI AND CHIEF PROVINCIAL OFFICIALS OF SHANTUNG AT A RECEPTION GIVEN BY THE GERMAN CONSUL AT TSINANFU

control, for as long as the Kiaochow Convention holds good, the proposed railway line will only have a local importance, and would be useless to China in the advancement of any broad national policy for the development of the Empire.

Weihaiwei, leased to Great Britain, has no future as a trade port. So it is quite clear that China is at present deprived of the only really good harbor on the Northern coast through which she could divert the great trade of the Central provinces. Japan holds the best habors for the outlet of Manchurian trade, and Germany occupies the port of Tsingtau, commanding the desirable trade routes from the sea to the great central provinces. If foreign railway programs are permitted full scope to develop, the logical sequence is that China will be forever barred from controlling a suitable deep water base for the furtherance of her own policy.

The situation outlined above is naturally one of vital importance to China, and it is interesting to note how she has solved the problem. Her move in the game, only recently announced to the world, is one of the most masterful pieces of political railway strategy yet recorded. By one simple line she effectively blocks the German program, nullifies the value of the British claims and opens for herself a port which will be under her own control. The deep significance of her move has apparently been lost sight of, in the general attention devoted to the Chinchow-Aigun project.

Some months ago, it was reported that the Chinese Government had opened the port of Haichow, a hitherto insignificant port in the north-eastern coast of Kiangsu Province just south of the Shantung border. This report, however, lacks official confirmation. The reason for such a step is now made clear by the imperial sanction to a scheme for building a railway from Kaifengfu, through Suchowfu, Tsingkiangfu and thence to Haichow.

Under date of March 8th, 1910, the Board of Communications memorialized the Throne on a railway project between Kaifengfu in Honan and Haichow, a seaport in the northern corner of the Province of Kiangsu.

According to the Memorial, the importance of this railway having been recognized by the Chinese Government, surveyors were despatched last spring to decide on the route to be adopted. The result of the survey was in favor of an early construction of the line, in view of the various advantages to be derived from the scheme.

Between Kaifeng and Suchow two routes were considered. One reaches Hsuchow via Chenliu, Kihsien, and Tangshan, while the other runs via Lanfeng, Kaocheng and Liukow, and along the old course of the Yellow River to Suchow. The latter, or northern line, running through a flat country, the cost of its construction will be less than the other route. But the southern line has the advantage of connecting the flourishing towns in the Province, and from the political and military point of view it is of more importance. It has, therefore, been decided to adopt this line. From Suchow there are three candidate lines to reach Haichow. The first is a straight line running eastwards via Peichow. The second is a line running in curve southeast to Hsuchien, thence turning to the north-east to make Haichow. The third line runs via Hsuchien to Chinkiang, from which place it turns northwards to reach Haichow. Of these three lines, the first is the shortest and least expensive one, but the construction of the Suchow-Chinkiang section having already been granted to the Kiangsu Railway Company, it is recommended that the third route should be adopted.

The cost of construction estimated, and the distances of each section are given below.

Kaifeng to Suchow, 560 li......	Tls. 6,700,000
Suchow to Chinkiang (this section to be built by the Kiangsu Railway Co.)	
Chingkiang to Haichow, 250 li..	3,000,000
Extension to the beach and harbor improvement at Haichow......................	2,800,000

Besides the above, there will be other minor items to be counted, and the total expense will amount to about 14 million taels, which, when compared with the other railways in China, is considered cheap, while the profits to be derived from this line will come next to the Peking-Mukden and Peking-Hankow railways.

Although the necessity of commencing the work as soon as possible is keenly felt by the Chinese Government, it is no easy matter for them to raise the funds required, without resorting to a foreign loan, which China does not desire at present. The surplus profits of the Peking-Mukden and Peking-Hankow railways having already been appropriated to the construction of the Kalgan-Kaihuacheng, Kirin-Changchun, Cheng-Tai, Taa-Ching, Pien-Lo and Shanghai-Ningpo lines, and other sources of income being also inadequate to meet with the fresh outlay of 14 million taels, the Board recommends that the work should be spread over several years, commencing it from more important sections of the line with such funds as are available for each year. By this means it is hoped to avoid any undue pressure being likely brought upon the financial resources of the Empire.

A glance at the map will show that the new line just keeps outside the German sphere of preferred rights in Shantung, so that opposition from that source cannot be fairly advanced, and its construction will effectively checkmate the German project to build a line from Yenchow to Kaifengfu. The map will also show that the new line, by connecting Kaifengfu with the Tientsin-Pukow at Suchowfu, obviates the necessity of the Peking Syndicate to extend its road in that direction, and in a measure it decreases the importance of the Pukow-Singyang project.

The new road will virtually be an extension of the existing Peinlo Railway, and will in time form the Eastern Division of the great Asian trunk line to Ili and Kashgar. The great volume of traffic from these regions, and from districts served by intersecting lines, will then be diverted to the new Chinese port of Haichow. With the connecting railways owned and operated by the Chinese Government, through rates can be made, which will draw the traffic to the new line and develop the new port The German dream of a greater Tsingtau is somewhat dispelled when the future of Haichow is thoughtfully considered.

China naturally advances the legitimate argument that the line is of immense advantage from a military and commercial viewpoint. In fact, she does not have to offer explanations as to her reasons for building the line, as it does not conflict with the treaty rights of other powers. The districts traversed by the line are the poorest and most desolate in China, subjected to periodical floods, which cause great damage to crops and originate famines and pestilence. Recent reports from Haichow state that famine is again upon the land, and thousands are dying of starvation and disease. A repetition of the great famine of 1906-07 seems imminent, and relief measures have been initiated by the provincial authorities. The proposed railway will enable the Government to ameliorate these conditions in the future, and provide work for thousands of wretched creatures, who must otherwise starve. So, hand in hand, politics and humanity are guiding the imperial authorities in the construction of the new line.

One of the most significant features of this move on the part of China is revealed by a close study of the map. From Chinkiang northwards to Haichow by the Grand Canal to Tsingkianfu is approximately 90 miles, and from here to the new port of Haichow via the proposed railway or the Yen river another 80 miles, or a total of 170 miles. The distance from Chinkiang to Shanghai via Woosung is about 160 miles or for all practical purposes the same. This really places Haichow in direct competition with Shanghai for the great Yangtsze River junk traffic, which carries no small portion of the products for export.

China has moved and cries checkmate to Britain and Germany. The game has been played fairly and above board, and the world will await with interest the next move on the part of Britain and Germany to regain their lost ground.—G. B. R.

Editorial Note.—Since Mr. Rea wrote the foregoing, the following paragraphs have appeared in the Chinese daily papers which point to the fact that China will not be permitted to build the road without protest from British and German interests. The same principle underlying the Chinchow-Aigun railway applies with equal force to the Kaifeng-Haichow Project.

The *North China Daily News* of May 12, 1910, says:

"It is reported that a loan of Tls. 1,800,000 will be obtained from the United States to build a railway from Kaifeng-fu to Chang-Chow, and Tls. 10,000,000 will be loaned from the British and Chinese Corporation for the same purpose."

From the *North China Daily News* of May 13, 1910:

"Negotiations are now proceeding between the Yuch'uanpu and a foreign syndicate for a loan of Tls. 20,000,000 to build a railway from Kaifengfu to Tsinanfu, but the bargain was not concluded as the Yuch'uanpu refused the syndicate's request that the line should be pledged as a guarantee of repayment."

From the *North China Daily News* of May 14, 1910:

"A report says that, as the French intend to invest capital in building a railway from Hsuchou to Haichou, the Germans oppose the proposition, as it is regarded as affecting German interests."

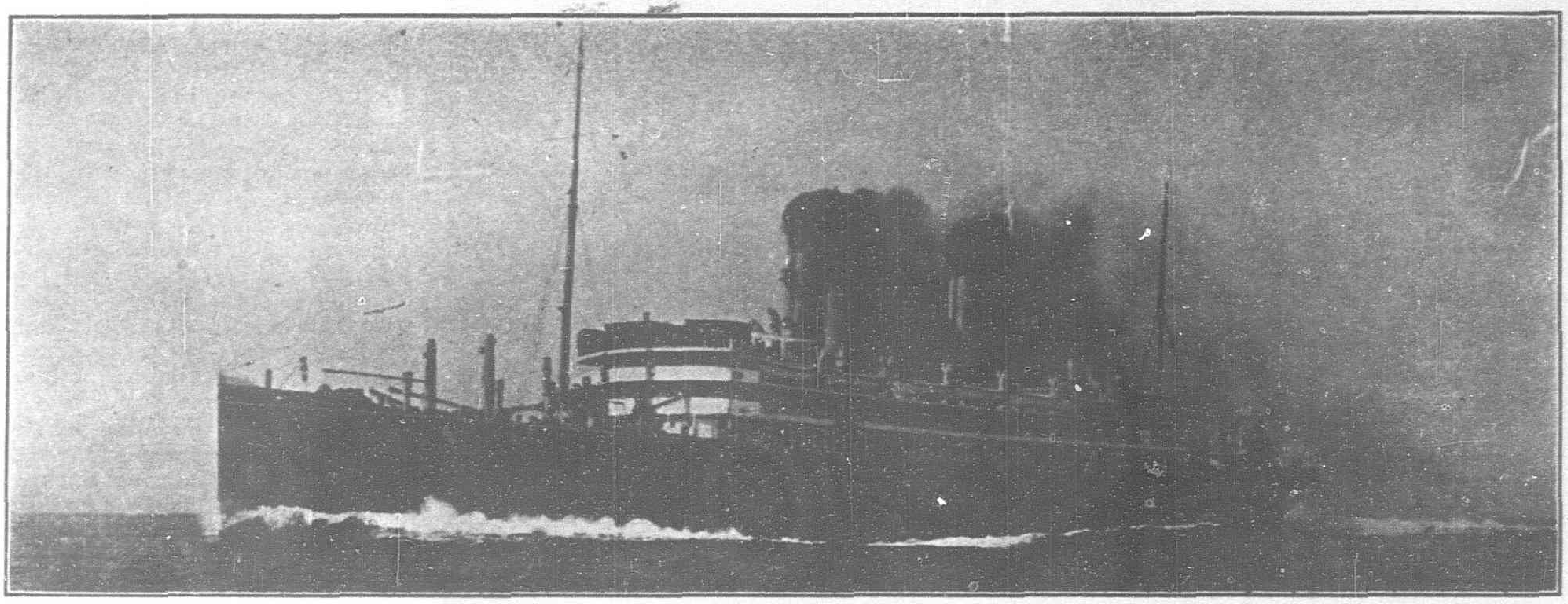
On April 26th, the Japanese paper at Dairen published the following telegram:

"Peking, April 26.—The Sino-American Syndicate has agreed to advance a loan of Taels 18,000,000 for the construction of the Kaifeng-Haichow Railway project."

As the Japanese have a peculiar way of securing accurate information of the inner workings of Pekin politics, long before other foreigners, it may be accepted that their news of April 26 was correct. If the latter news is also true, it indicates that British interests immediately entered the field for participation, and the second item also tells us that Germany, alive to the menace to her position, immediately proposed her old pet scheme of a line from Kaifeng to Tsinanfu, which would obviate the Chinese project. The last item of the 14th tells us that Germany has protested against the use of any foreign capital in the region of Shantung, although the proposed line is outside her recognized railway sphere. And here we have a repetition of the Chinchow-Aigun embroglio, with the European powers refusing to recognize China's right to build a railway in her country without their consent. How long will it continue?

New Steamers Built by the Mitsu Bishi Dockyard and Engineering Works, Nagasaki, Japan, for the Nippon Yusen Kaisha and Toyo Kisen Kaisha.

Great interest has been taken in maritime circles in the four new twin-screw steamers, the *Kamo Maru*, *Atsuta Maru*, *Hirano Maru*, and *Kitano Maru*, built for the Nippon Yusen Kaisha by the Mitsu Bishi Dockyard and Engineering Works of Nagasaki, Japan. These four vessels were designed for the European service of the company. The gross tonnage averages 8,500 tons.



S. S. "CHIYO-MARU"

Trans-Pacific Turbine Driven Passenger Steamer "Chiyo-Maru" for T. K. K.—Built and engined by the Mitsu Bishi Dockyard and Engine Works, Nagasaki, November 1908.—Length (overall), 570 feet 0"; Breadth, moulded, 63 feet 0"; Depth (shelter deck), 46 feet 6"; Gross tonnage, 13,426 tons; Displacement, 18,725 tons; Engines, Parsons' Three Shaft Arrangement; Boilers, Single Ended Scotch Boilers (13); I. H. P., 19.591; Speed, 21 knots. (This photo was taken on her full speed trials the 13th October, 1908.)

The *Kamo Maru*, *Hirano Maru* and the *Atsuta Maru* were launched in 1908 and the *Kitano Maru* in 1909. The average speed of these vessels runs from 16.41 to 17.19 knots. The dimensions and other particulars follow:

Length between perpendiculars	465 feet.
Breadth, moulded	56 feet.
Depth	34 feet 6 in.
Gross tonnage	8524
Draught	27 feet 0¾ in.
Dead weight	9501 tons.
Speed	16.41.
Number of first-class passengers	32
Number of 2nd-class passengers	12
Number of intermediate passengers	138

Each vessel is fitted with a twin set of triple expansion engines, each set having a high-pressure cylinder 25 in. in diameter, an intermediate cylinder 41½ in. in diameter, and a low-pressure cylinder 69 in. in diameter, the stroke in all cases being 48 in., to work with a steam pressure of 200 lbs. per square inch.

The high-pressure cylinder is fitted with piston-valve, and the intermediate and low-pressure cylinders with slide-valves. The intermediate-pressure cylinder slide-valve is balanced, and is known as a square piston-valve. Dewrance's impermeators are fitted to the intermediate and low-pressure casing covers. The packing-rings for the high pressure and intermediate-pressure pistons are of the Ramsbottom type, provided with restricted movement. Packing for the low-pressure piston is of simple design.

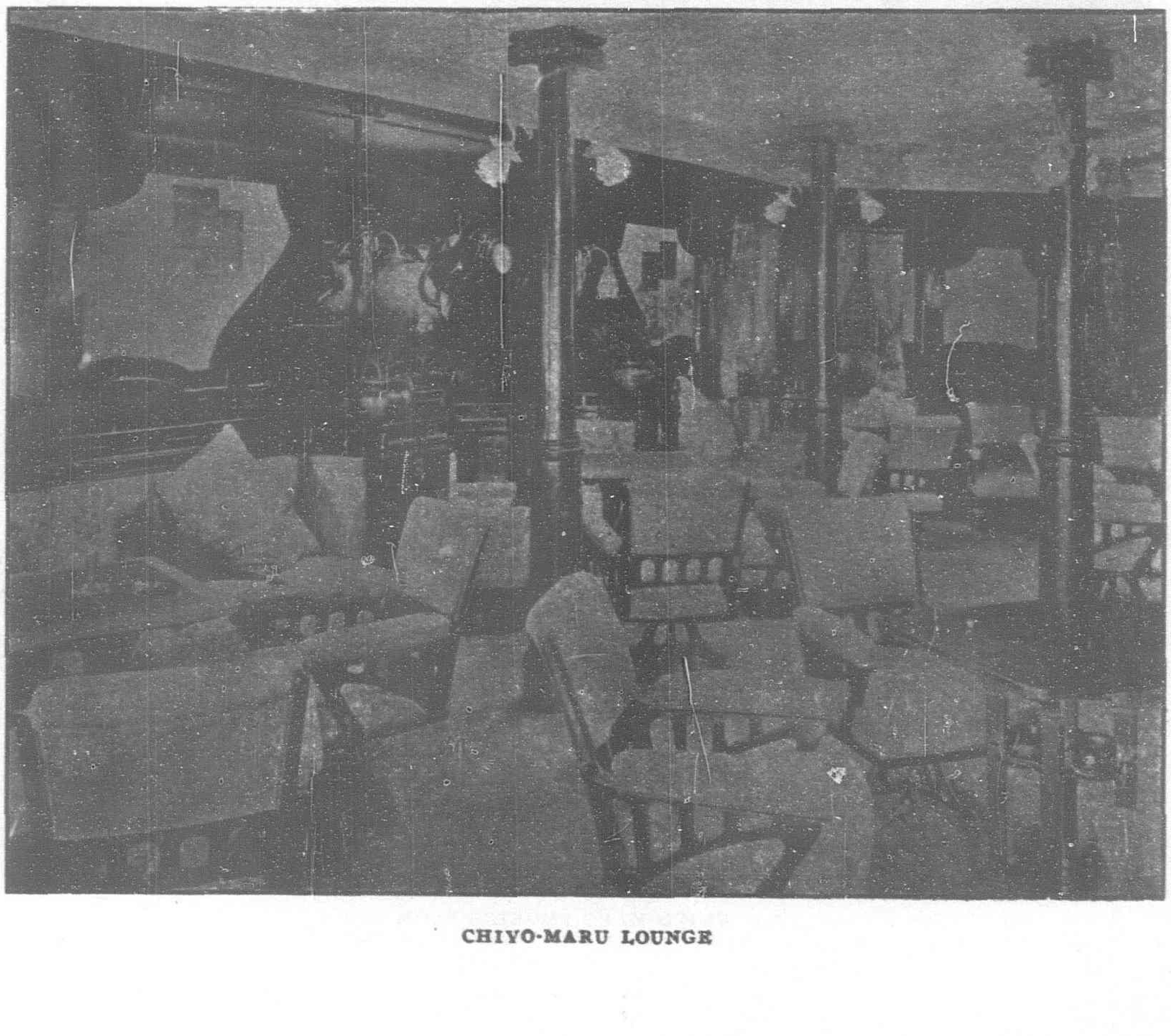
All the working parts of the engine are made to standard gauge. They are of ingot forged steel, while the propeller shafts are of patent "Lockfast" iron. The propellers are right and left-handed, each with four blades, of Stone's manganese bronze, and fitted with a large elongated cone over the nut. After a series of trials the propellers proved highly efficient.

Box columns are adopted for supporting engine cylinders, one serves as a hot-well and air-vessel for the air-pump, while others serve as reservoirs for lubricating oil.

The condensers, which are separate, have strong cast-iron casing, with rolled gun-metal tube-plate, and tinned, solid-drawn brass tubes. The top of the condenser is specially shaped so that the exhaust steam from the engine flows uniformly all over the tubes.

The various auxiliary appliances include Edwards' patent single-acting air-pump, Weir's patent feed-heater and automatic pumps, circulating pump, feed-water filter, auxiliary condenser of Morison's "Contraflo" type, also pumps for sanitary purposes, for washing decks and fire-extinguishing, and for supplying fresh water for passengers' use. There are also bilge and ballast pumps. The distilling plant consists of one large evaporator, by Messrs. Weir, capable of producing from sea-water 40 tons of fresh water per twenty-four hours, and one distilling condenser having an output of 7,000 gallons of pure fresh drinking water per day.

The boilers are arranged in one compartment. There are six single-ended boilers. Each boiler is 14 ft. 3 in. in diameter and 11 ft. 6 in. long, and has three furnaces. The flues, which are of Morison bulb suspension type, have an internal diameter of 3 ft. 5 in. The boilers are worked at a pressure of 200 lb. to the square inch, and are on the Howden forced-draught system.



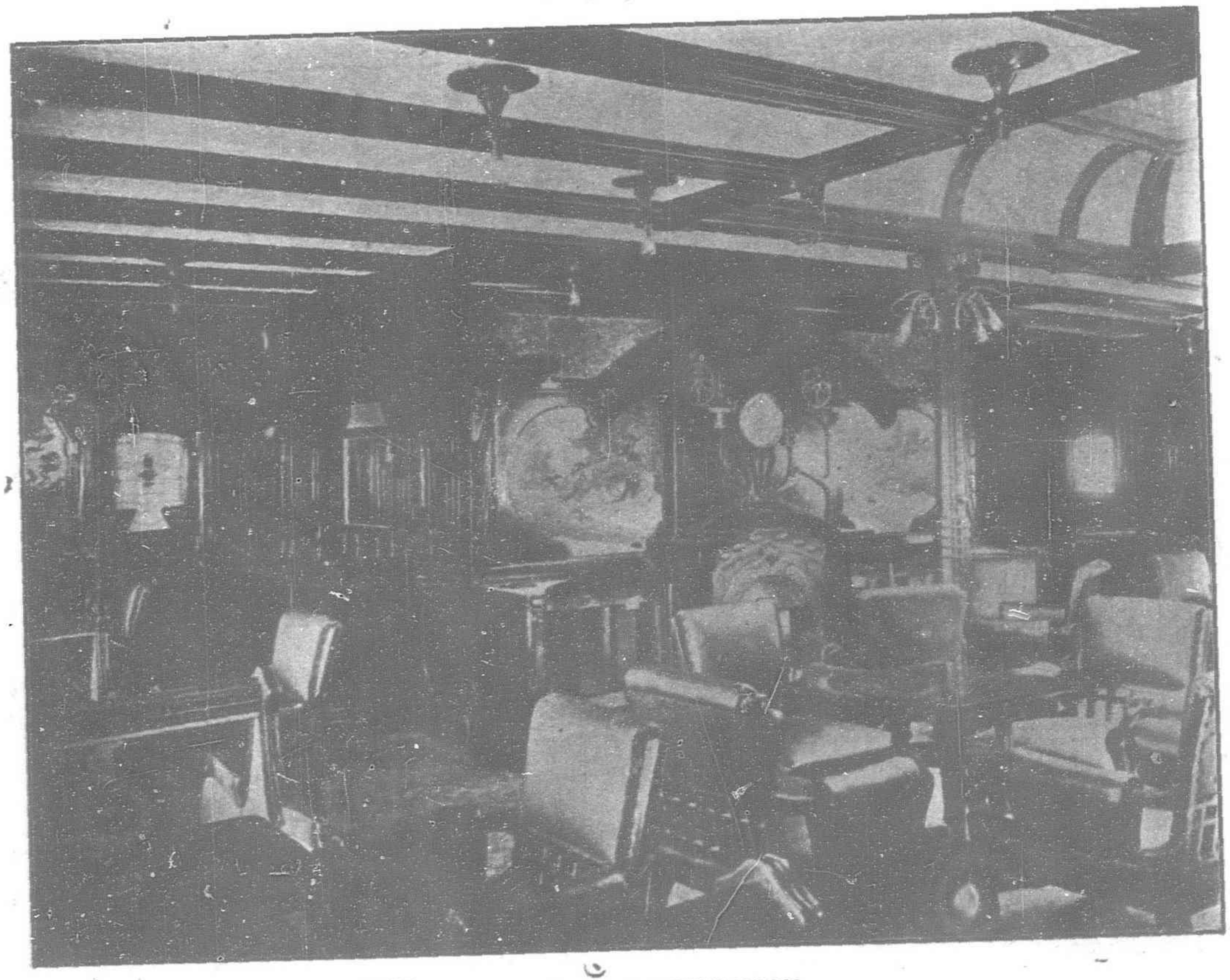
CHIYO-MARU LOUNGE

Each has one special high-speed single-cylinder double-acting engine of the open type, and is capable of working all boilers when the main engines are running at 5,500 indicated horse-power on service.

There is one large funnel, circular on plan, 12 ft. 9 in. in diameter and rising to a height of 110 ft above the keel of the vessel. The funnel is double, the space between the inner and outer funnels being utilised for ventilating the boiler-room and stokeholds. The provision for the disposal of the ashes has been made by fitting two powerful See's ash-ejectors, one in each stokehold, worked by a special donkey-pump.

An interesting description is given in *Engineering*. The vessels are constructed generally of steel, to the highest class of Lloyd's requirements, and they are subdivided into eight compartments by water-tight bulkheads, with a cellular double bottom from stem to stern.

DINING SALOON, CHIYO MARU



CHIYO MARU SMOKING-ROOM

There are six decks; these are known as the lower, the main, the upper, the bridge, the promenade, and the boat-decks. The lower deck is only at the fore part of the vessel, the next two decks—main and upper—extend from stem to stern, and the bridge-deck extends 178 ft. in the central part, having a poop 80 ft. long, and a forecastle 54 ft. long. Above this level there is, in the central part of the ship, the promenade-deck, 138 ft. long, and aft there is an aft boat-deck 56 ft. long. The boat-deck proper covers the entire length of the promenade-deck, with navigation bridge at the forward end. At the forward end of the boat-deck there are located under the bridge the wheel-house, chart-room, and captain's room. Abaft these is the light and ventilating-shaft for the main dining-saloon, and around it is sufficient promenade space for the use of officers. Ten boats are stowed on this deck in order not to interfere with the space on the promenade deck. The remaining boats are stowed on the aft boat-deck. All boats are fitted with Mill's patent instantaneous engaging and disengaging gears. At the aft end of the boat-deck there is the engine-room skylight, also the celestory skylight for the first-class smoking-room. The promenade deck is entirely alloted to the principal public rooms and to promenade space. There is a steel house extending almost the entire length with a broad and spacious promenade around it, yet under the cover of the boat-deck. The drawing-room and social hall occupy the forward end of the house, having a companion-way leading down to the bridge-deck accommodation. The mid portion of the house is taken by the boiler up-take and engine-room hatch. At the aft end there is a first-class smoking-room, 24 feet by 28 feet.

The bridge-deck is also entirely used for the first-class passenger accommodation. The deck-house, which occupies practically the full length of the deck, has on each side two-berth state-rooms, exceptionally capacious and lofty. At the fore end of the house there is a large well to the main dining-saloon on the upper deck below. This light and ventilating well has been ingeniously treated, and serves to add to the decorative effect. It pierces the deck above, through the drawing-room and social hall, and also the boat-house deck, terminating with an outer skylight on the top of the navigation bridge; but internally, at the boathouse level, there is a charmingly designed stained glass dome of highly decorative character. Abaft the well there is a main stairway leading to the promenade deck above and to the dining-saloon below. Ample natural light is provided in the way of the staircase by means of a large and handsomely designed trunk skylight. At the aft end of the house there is a companion-way to the smoking-room. The remaining space in this deck-house has been devoted to bath-rooms and lavatories.

The poop-deck is given over to the second-class passengers. There is a deck-house on the poop, having at the forward end the second-class smoking-room, and at the after end second-class cabins, the latter adjacent to the companion-way leading to the second-class dining-saloon and cabins below. One of the second-class cabins on the poop-deck is arranged so that it may be easily turned into a wireless-telegraph room. The forecastle deck is fitted with a strong breakwater, and carries the most approved equipment for handling the vessel safely and expeditiously.

The upper deck has a large number of cabins for officers and engineers. There is also the main dining-saloon forward of these rooms, with the first-class pantry immediately abaft it. Further aft there are more state-rooms, one of which is specially large and furnished superior to the other state-rooms, and may be styled a *cabin de luxe*. There is also a photographic dark room in this vicinity.

The galleys are located at the aft end of the bridge-house. Of this portion of the upper deck, the starboard side of the ship is given up to the chief steward, purser, doctor, dispensary, barber's shop forward, and officers' rooms aft, and the corresponding cabins on the port side are arranged for officers and engineers' mess-rooms forward, and engineers' rooms aft, The first-class passengers' accommodation at the fore end of the house is divided off from these spaces by doorways, so that the officers and engineers are entirely dissociated from the passengers, and, moreover, the engineers are berthed near to their work. The location of the doctor's room and dispensary is particularly good, being convenient for all classes of passengers and crew. The barber's shop is between the first and second-class quarters. The deck hands are berthed right forward under the forecastle.

The dining-saloon and cabins for the second-class passengers, also cabins for junior officers and laundry, are under the poop.

The lavatories are fitted with the most approved sanitary arrangements, and instead of being arranged in large compartments, they are distributed throughout the habitable quarters. The floors are laid with black and white encaustic tiles. All the baths for the first-class passengers are of Victorian porcelain. The sanitary appliances are supplied by Messrs. Shanks and Co., Limited. The first-class state-rooms are fitted with patent berths, supplied by Messrs. Hoskin and Son, Limited.

The intermediate and third-class passengers are accommodated on the main deck forward. The firemen and stewards are berthed aft on the same deck; thus the firemen may go to the machinery space or back to their sleeping quarters without passing by any part of the ship occupied by the passengers. Abaft the machinery-space a cold-chamber has been provided for providing the fresh provisions for the ship's *personnel*, and is quite distinct from the refrigerated holds for cargo. The chamber includes two meat-rooms, one fish-room, and one fruit and vegetable-room, and the total capacity is 2,800 cubic feet. The plant is capable of maintaining the temperature of the chamber at 26 deg. Fahr. when passing through the tropics with the machinery only working six hours out of the twenty-four. At the same time it can produce 3 cwt. of ice for table use. The plant was supplied by Messrs. J. and E. Hall, Limited. The remaining part of the main deck is given up to cargo, bunkers, silk-rooms, parcel-room, mail-room, baggage-room, and provision-rooms. The lower deck and holds are entirely given up to cargo.

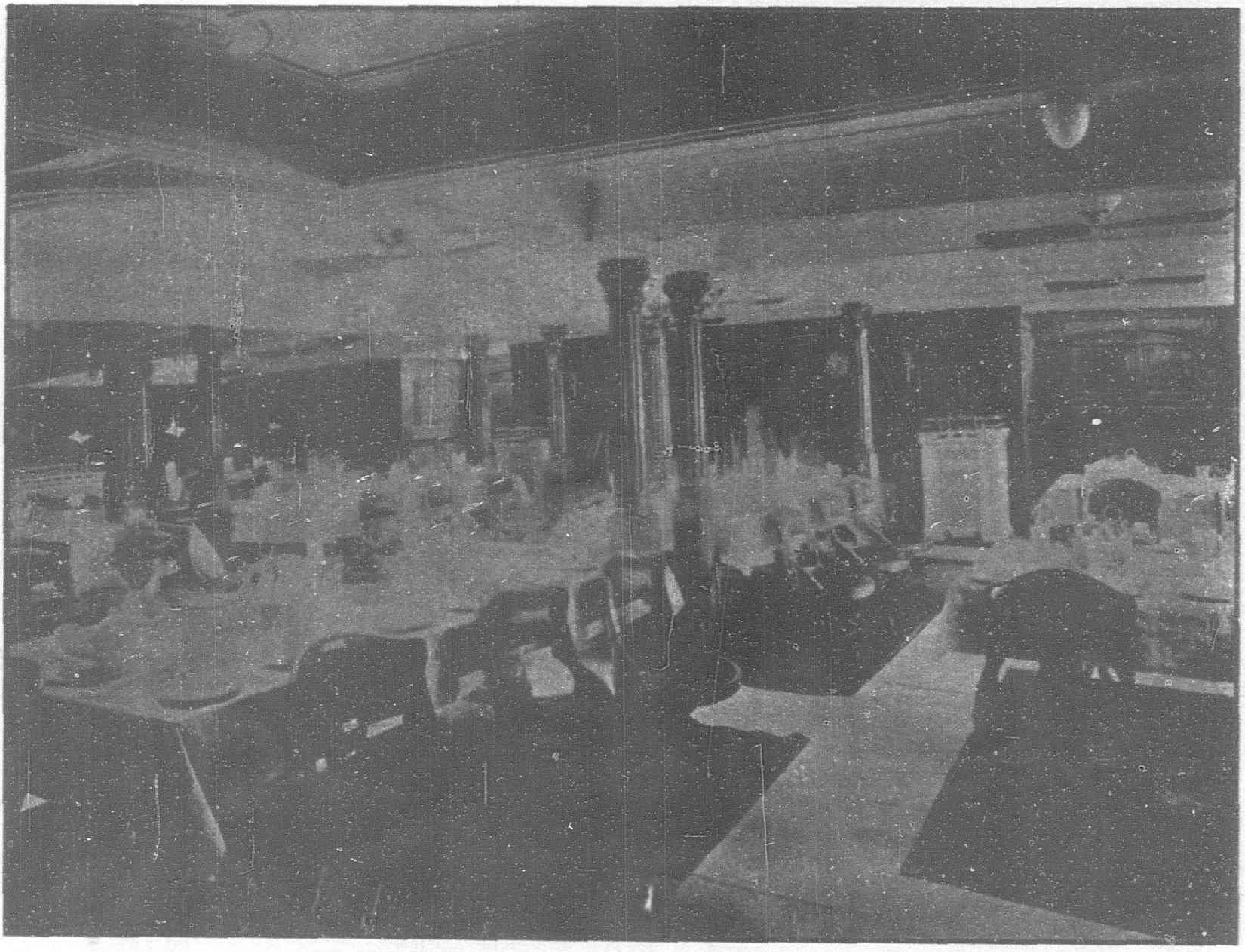
The vessel is propelled by twin screws, and these are supported at the outboard end by a cast-steel spectacle-piece attached to the stern-frame. The shafting is contained entirely within the framing of the ship, and for this purpose the framing is bossed out in spectacle form. The stern-frame has a screw port, as in the single-screw arrangement, although the propellers do not overlap. This enables the projection of the propellers outboard to be minimized, and reduces the extent of the bossing out of the framing. It also conduces to speed. The stern-frames, spectacle-pieces, and rudders, as illustrated, were supplied by the Darlington Forge Company, Limited. The rudder is worked by a steam steering gear by Messrs. Caldwell and Co., Limited. This gear is placed on the upper deck under the poop, and actuated from the navigation bridge; it is fitted with Hastie's patent friction-brake. Hand-gear is also fitted at the rudder head on the poop as a stand-by.

The scheme of the decorative features for all four ships was worked out on the same lines, with slight modification; the Kamo and Hirano are, however, exactly alike, as are also the *Atsuta* and *Kitano*. All of the decorative work was designed and manufactured at the builders' works.

The first-class drawing and social hall are adjacent to each other, and communicate directly with the main companion-way. The drawing-room is finished in white, relieved by pale-green silk panels, with autumn wild-flower design, and a panelled dado of polished white beech. The furniture is of white beech and maple, and the upholstery is of dark-green silk damask; the curtains and other hangings are also of dark green. The floor is laid with Wilton carpet of green shade. An Erard's grand piano occupies a corner in the drawing-room. The side of the well is decorated with art glass in nickel-plated frame-work. The social hall is treated in exactly the same way as the drawing-room.

The first-class smoking-room is treated in old Japanese style, moderated to suit European architecture. Stained oak is used throughout, and the floor is of interlocking rubber tiles. The upholstery is of dark maroon, and the hangings of Japanese tapestry of subdued and quiet brown shade, with a classic pattern. The roof is constructed in the clerestory style, with a large skylight having light-coloured stained

SOCIAL HALL, CHIYO-MARU

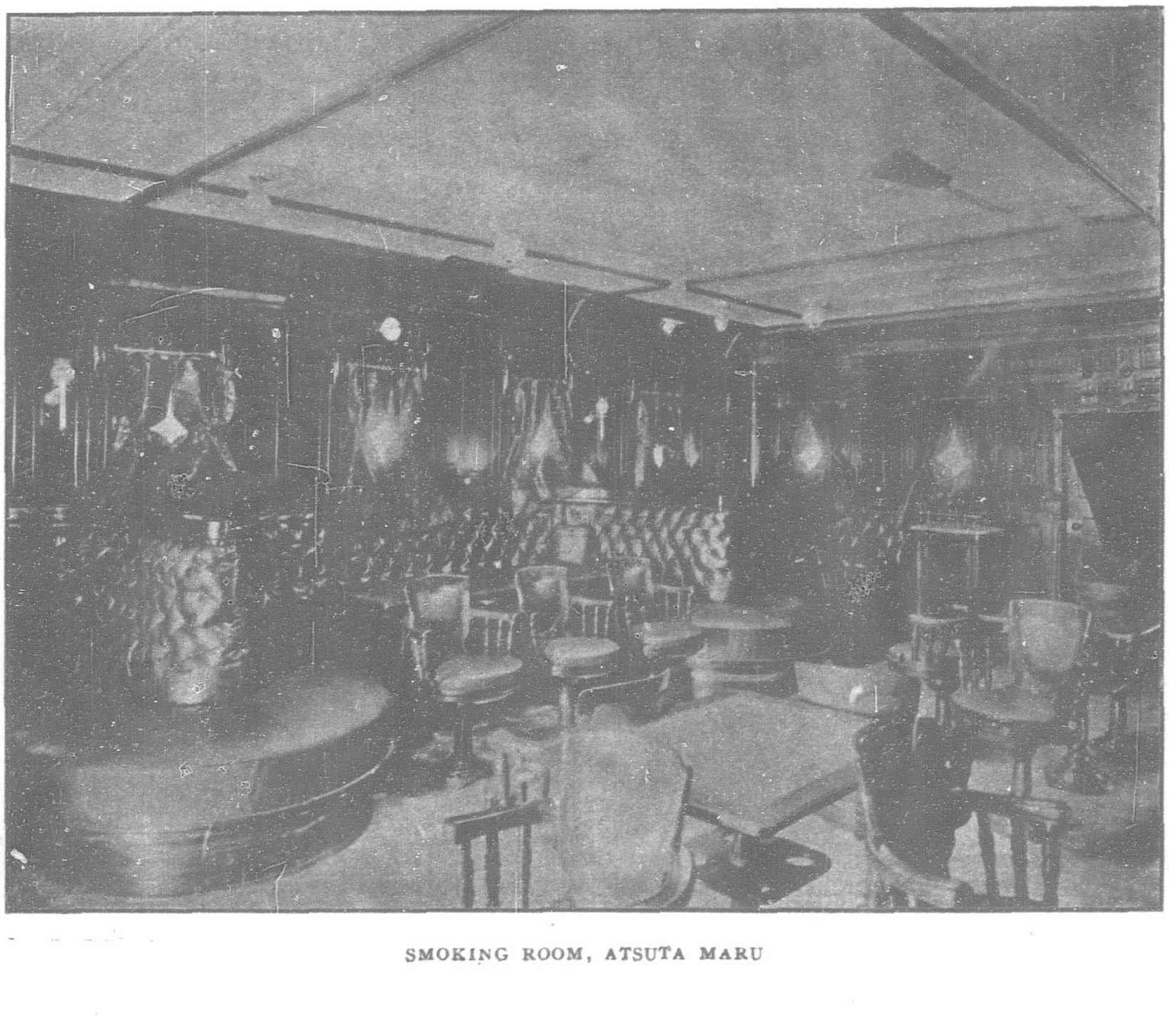


DINING SALOON, ATSUTA MARU

glass. The ventilation of the room by means of electric fans is very effective.

The first-class dining-saloon occupies the full width of the ship, and is 32 ft. long; seating accommodation is provided for sixty-eight passengers, so that all the first-class passengers may dine at one sitting. Only small tables are fitted, the largest being suitable for seven persons. The revolving seats have no arms, which increases the "elbow room." The feature of the decoration is its simplicity. There is an upright Erard's piano at the forward end of the saloon. Electric fans have been substituted for the punkahs over each table. The central well, while the main decorative feature, serves to facilitate ventilation, and has a length of 12 ft. and a width of about 9 ft. It has a stained-glass dome.

SOCIAL HALL, ATSUTA MARU



SMOKING ROOM, ATSUTA MARU

The vestibule on the promenade deck and entrance hall on the bridge-deck are panelled and framed in oak, and the floors are covered with neatly-designed interlocking rubber tiles. The stained glass work for the ships was manufactured by the Tokyo Stained-Glass Factory.

The electrical installation is comprehensive. The generating plant, located in the tunnel recess, includes two sets, each giving an output of 35 kilowatts when running at 300 revolutions per minute. The engines are of the self-lubricating type, and the dynamos are six-pole compound-wound. The current is transmitted by insulated cable of high conductivity, all wiring being done in double-wire distributing-box system. These machines, in addition to lighting the ship, provide current for driving fans. There are thirteen 36-in. ceiling fans in the first-class dining-saloon, five in the smoking-room, four in the social hall, four in the drawing-room, four in the second-class dining-saloon, and two in the second-class smoking-room. There are also fourteen 18-in. fans for the ventilation of the holds, and forty-two 12-in. bracket fans for the first-class cabins. Throughout the ship there are lights equal in all to 8022 candle-power, and in addition ten cargo lamps of 200 candle-power each, two arc lamps of 3,000 candle-power each, and one search-light projector of 16,000 candle-power. The main switchboard has nine circuits: six for the lighting of the ship, one for the fan-motors, and one for the search-light projector. The engines and dynamos, fan-motors, and all fittings for the installation are of the builder's own design and make, and were fitted complete on the ships by the builders' workmen.

As regards the telephone service, there is on the navigation bridge a telephone communicating with the engine-room, the look-out at the forecastle, and with the aft boat-deck for docking orders. The telephones are of a pillar type and of the loud-speaking marine pattern of Graham's make.

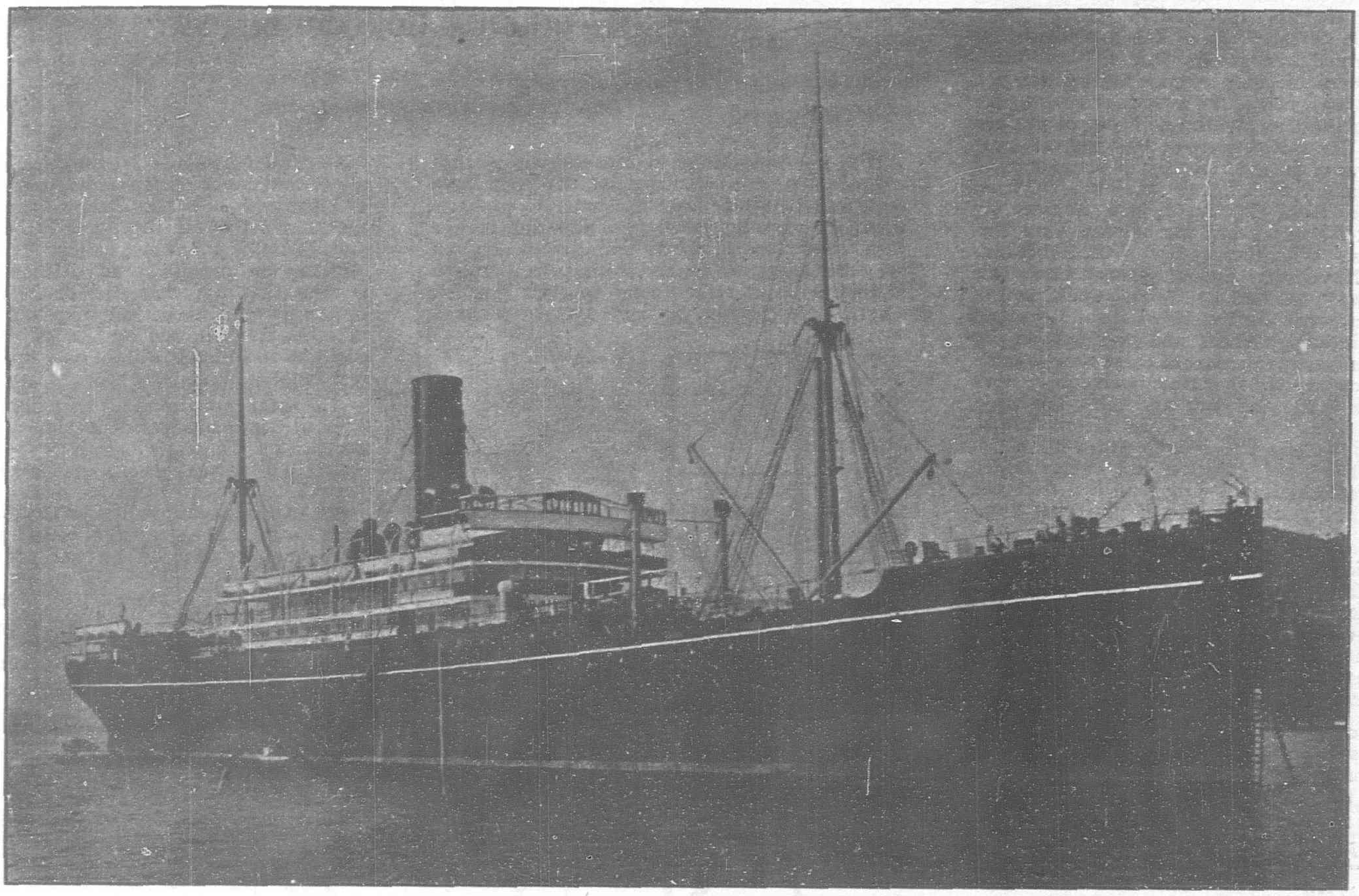
While the vessel is finished to first-class passenger steamer requirements, the cargo-carrying capacity of the vessels is of greatest importance in this line, and for dealing with the 6,000 odd tons of net cargo there are ten derrick cranes, four of which are capable of lifting 10 tons, and the others 6 tons. In addition to these there is fitted one special heavy derrick capable of lifting 40 tons weight. This derrick is worked by two 9-in. by 16-in. steam-winches working on one drum, and one hoisting winch for topping. Besides these winches there are eight steam-winches for working other derricks. All winches are of the builders' pattern and make.

The steam windlass with capstan is by Messrs. Napier Brothers, Limited, and is fitted with the makers' patent self-holding brake. One steam warping capstan by Messrs. Clarke, Chapman, and Co., is also fitted on the poop.

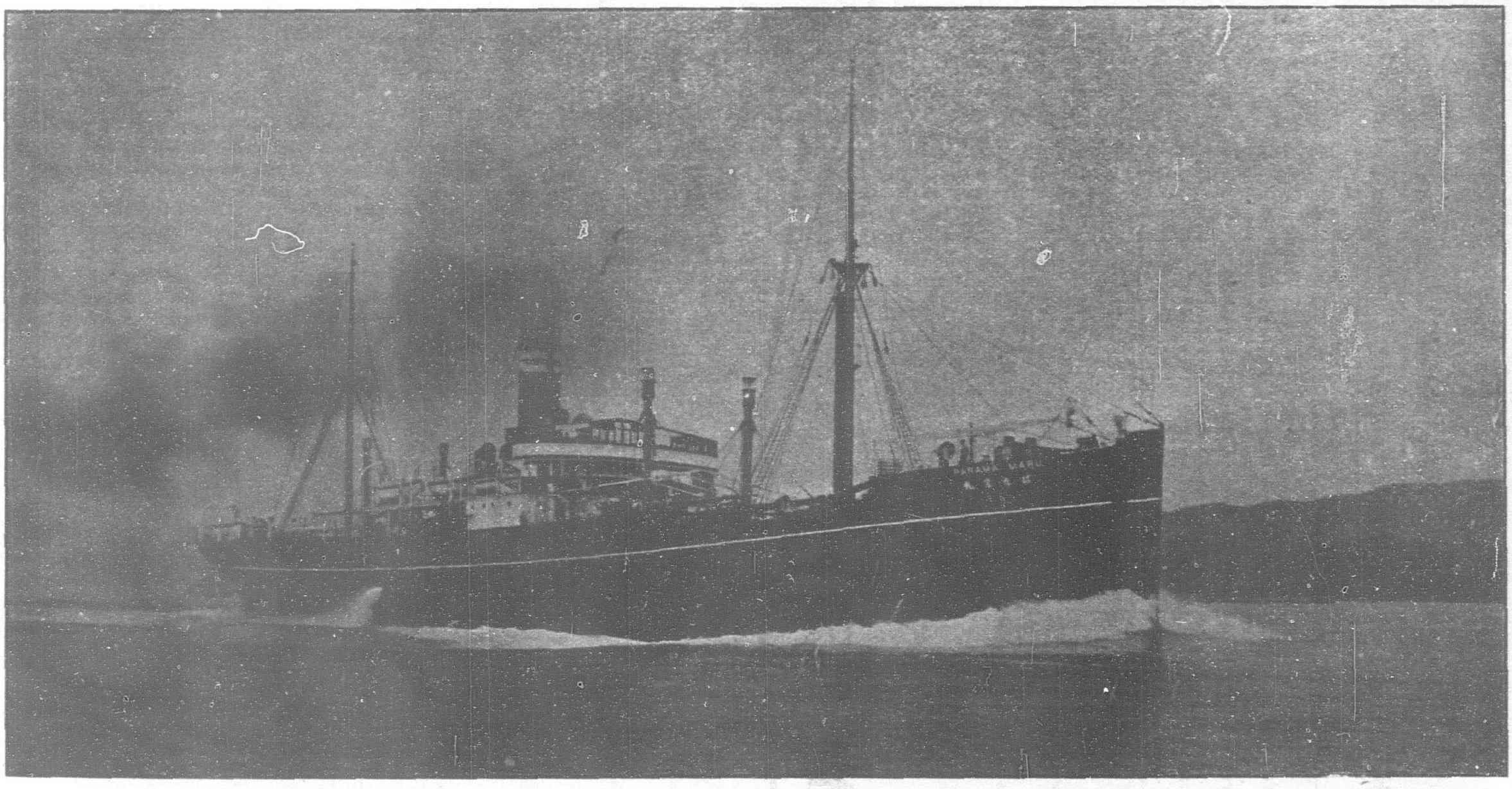
The ship's telegraphs were supplied by Messrs. Chadburn and Son.

A complete system of water supply is distributed throughout the ship, maintaining the continuous supply of cold fresh water, and hot and cold salt water, not only to all the sanitary quarters, but also to various galleys, pantries, sculleries, etc.

The history of the Nippon Yusen Kaisha has been a remarkable one. During the last fourteen years, twenty-four vessels with a tonnage of from 6,000 to 8,500 each have been added to its European and American service. The Nippon Yusen Kaisha was practically the outcome of the amalgamation of the Union Transportation Company and the Mitsu Bishi Mail Steamship Company in 1885 under Government patronage in the shape of a guarantee of an annual dividend of ten per cent to the shareholders. The Government reserved the right to nominate the chief officers of the company, but in 1893 the passage of the commercial law eliminated the government influence from the management. At this time the operations of the company were confined largely to coastwise trade and to China ports. Later the company extended its operations to India. When the war broke out practically all the steamers of the Nippon Yusen Kaisha were placed at the



S. S. ATSUTA MARU IN NAGASAKI HARBOR



S. S. PANAMA-MARU.—First of three sister-ships being built at the Mitsu Bishi Dockyard & Engine Works, Nagasaki, to the order of the Osaka Shosen Kaisha for its American Service.—Principal Dimensions:—Length, 400′ 0″; Breadth, 51′ 0″; Depth, 32′ 6″; Speed attained at her trials, 15 knots. Type of Engines:—1 set Triple Expansion Engines; Boilers, 4 Single Ended Scotch Boilers fitted with Howden's Forced Draft. Passenger Accommodation:—1st Class 8, 3rd Class, 180.

disposal of the government where they remained until the close of the war in 1905. During this time chartered vessels were employed in taking care of the China and Indian trade. When the vessels of the Nippon Yusen Kaisha fleet were returned, the government paid the company a bonus of yen 2,500,000 and of this yen 2,000,000 was placed in a special reserve for increasing the fleet by the addition of modern vessels. The initial step in the program was the placing of an order for six new steamers of 6,000 tonnage each. One was ordered from the Mitsu Bishi Dockyard and Engineering Works at Nagasaki and the balance from British yards. With the passage of the Shipbuilding and Navigation Encouragement Laws this number was increased to twelve vessels, two of which were built by the Mitsu Bishi Dockyard and Engineering Works and the balance by British builders. The last of these were launched in 1899 and since that time twelve more have been added, the last four and most modernly equipped being the *Kamo Maru, Hirano Maru, Atsuta Maru* and the *Kitano Maru* to which this article refers Of these last twelve added to the fleet, nine in all were launched from the Mitsui Bishi Dockyard and Engineering Company

As evidence of the growth of the Nippon Yusen Kaisha may be taken the increase in size of the fleet under its control during the last twenty-five years from a small aggregation of coastwise vessels to an aggregate of over 300,000 gross tons. The capital is now yen 22,000,000 with a reserve fund of yen 10,000,000.

In all cases the full-speed trials were run on the measured three-mile Government course outside of Nagasaki Harbor, under the supervision of the Government officials. The following table gives the results of those runs:—

Mean Results of Full-Speed Trials of "Kamo Maru," "Hirano Maru," "Atsuta Maru," and "Kitano Maru."

Number of Runs	"Kamo Maru." 16-6-1908		"Hirano Maru" 16-11-1908		"Atsuta Maru." 15-2-1909		"Kitano Maru." 12-4-1909	
	Speed.	Revs.	Speed.	Revs.	Speed.	Revs.	Speed.	Revs.
	knots		knots		knots		knots	
1 down	16.554	93.	16.510	93.25	16.687	98.25	17.053	96.
2 up	16.284	93.5	16.621	93.25	17.387	97.75	17.218	97.25
3 down	16.594	93.5	16.532	93.75	16.710	98.25	17.194	97.38
4 up	16.467	93.5	16.598	93.75	17.314	97.75	17.266	97.
5 down	16.105	90.5	16.598	93.50	16.621	97.5	17.030	96.
6 up	16.084	90.25	16.554	93.75	17.266	97.5	17.194	96.25
Mean of Means	16.41	....	16.57	....	17.	....	17.19	....

It will be seen that the performances of all the ships were exceptionally favourable and satisfactory. In service the four vessels have proved themselves most economical in working and have given every satisfaction to the owners.

DYNAMIC FLIGHT

By GEORGE GORDON BLACK

PART 2.—HISTORICAL

(Continued from April.)

It is a curious thing in this connection that whereas fish, ships and dirigible balloons have been found to offer least resistance to progress when they are propelled in a direction in line with their length, birds and aeroplanes, on the other hand, are formed so that the direction of motion is at right angles to their greatest length. Here again we have a constructional point that is not fully explained. The consensus of expert opinion would appear to indicate, however, that in a plane form which has very great depth in comparison with its entering edge the difference in air pressure between the upper and lower surfaces sets up a greater loss of energy than is the case with a wide span plane. Further, if the plane is made deep—and assuming that the greatest lifting effect is obtained in proximity to the front edge—it is clear that the after part of the surface will obtain little or no benefit from working in the air already disturbed by the forward part—in addition to which it will, of course, increase the resistance of the plane to progress through the air.

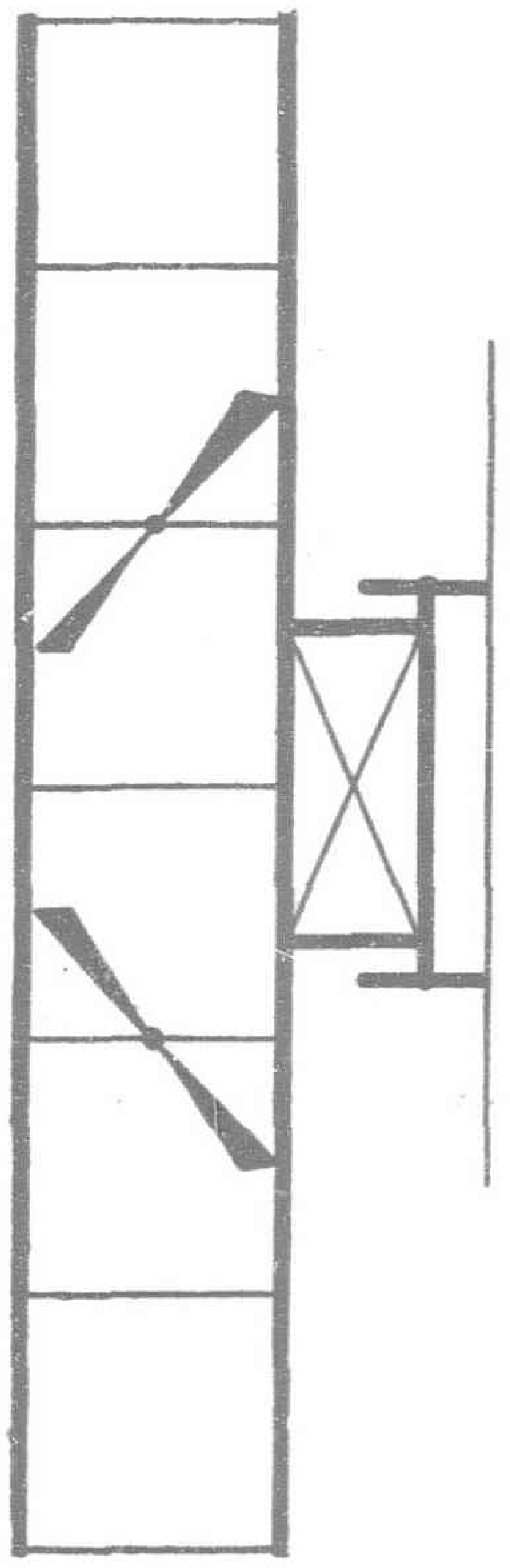


FIG. 2.—FRONT ELEVATION OF SUPERPOSED BIPLANE

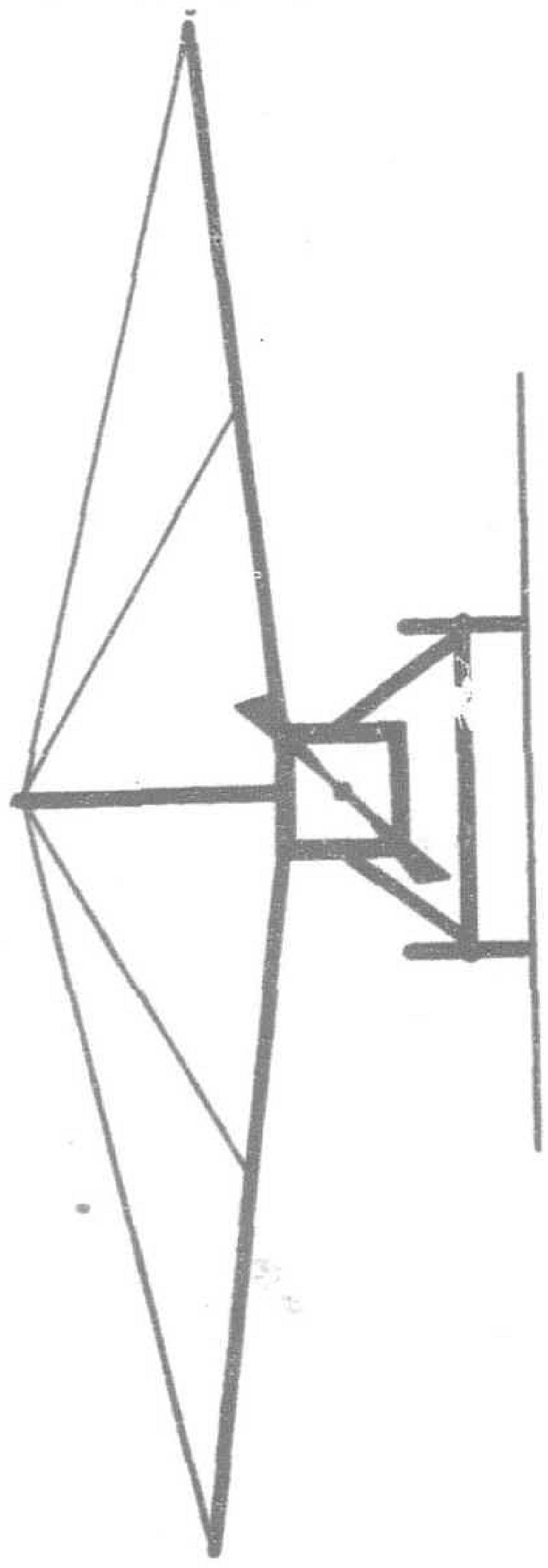


FIG. 1.—FRONT ELEVATION OF MONOPLANE

The actual amount of lift that can be obtained from an aeroplane varies in almost direct proportion to the angle at which it attacks the wind. Of course there is a limit but at any angle between 1 in 5 and 1 in 20 Maxim has proved that the lifting effect will be just as much greater than the drift as the width of the plane is greater than the elevation of the front edge above the horizontal—that is to say, if an aeroplane is set at an angle of 1 in 10 and 1 lb. pressure is employed in pushing it forward the lift will amount to 10 lbs. If the angle be changed to 1 in 16, the lift will be 16 times as great as the drift.

On first thoughts it appears that the correct thing to do is to set the plane so as to give the greatest lifting effect, but further consideration shows that by increasing the angle the resistance is also increased and greater power is required for driving the machine. A compromise must be arrived at therefore and observation of existing machines shows that the average angle is about 1 in 10.

Again, the supporting power of aeroplane surfaces set at small angles can be very much increased by accelerating their velocity for double the speed gives four times the lifting effect. In consequence of this the total plane area may be considerably modified by increasing the speed. Inversely, slower flying speeds can be obtained by larger supporting surfaces.

PART 3.

In the previous article of this series I referred briefly to the cross-sectional form of plane surfaces, their angle of incidence and the question of speed in relation to weight-carrying capacity. We have now to consider the reasons for disposing the surfaces in the various familiar and characteristic forms.

Modern aeroplanes are divided into several groups each of which is known by a descriptive name that, in itself, signifies a number of surfaces and their relative positions. Thus we have the monoplane (Fig. 1), the superposed biplane (Fig. 2), the superposed triplane (Fig. 3), and the tandem biplane (Fig. 4), while in addition there are numerous combinations of plane surface distribution which may be termed just as the reader pleases. Those mentioned, however, represent the machines in the order of popularity.

From a purely mechanical point of view there appears to be no objection to dividing the total supporting area into a number of parts—providing that certain fundamental conditions are not overlooked—and hence the matter resolves itself into a question of convenience. A certain minimum area is essential and this quantity varies according to the speed at which the machine is designed to run. Spuposing that an aeroplane is of 600 square feet surface and lifts a total weight of 1200 lbs.—2 lbs. per sq. ft.—at 35 miles per hour, it would obviously be impracticable to construct it with a single span of 100 feet by 6 feet deep. It is much more convenient to build it in two spans of 50 feet by 6 feet placed one above the other If, however, the same weight was required to be transported and the speed could be raised to 70 miles per hour, an area of 30 feet by 5 feet—not calculating increased resistance—would be sufficient and it could be made in one span only.

In superposing plane surfaces or placing them tandem fashion there is a factor of air disturbance introduced that must be compensated for, otherwise one of the surfaces will be affected by the displaced air from the other and its lifting power reduced correspondingly.

It is evident that the air, at the rear edge of a plane surface moving rapidly through the atmosphere, is deflected downwards at a considerable velocity and imparts in consequence a certain amount of resistance to the passage of another plane if placed in close proximity. To overcome this difficulty the underneath plane must be set at a more acute angle than its fellow in order to give an accelerated speed to the air on which it is being supported and thereby obtain a greater lifting effect. The same remark holds good for tandem planes which are in even a worse position since the rear surface must necessarily be working on the "backwash" of the front one. The difficulty increases also with the number of planes used, hence it would appear desirable to reduce the surfaces to the minimum quantity and, in the case of superposed biplanes and triplanes, to place them as far as possible apart. Observation of existing machines shows that the average distance between the planes is equivalent to their depth.

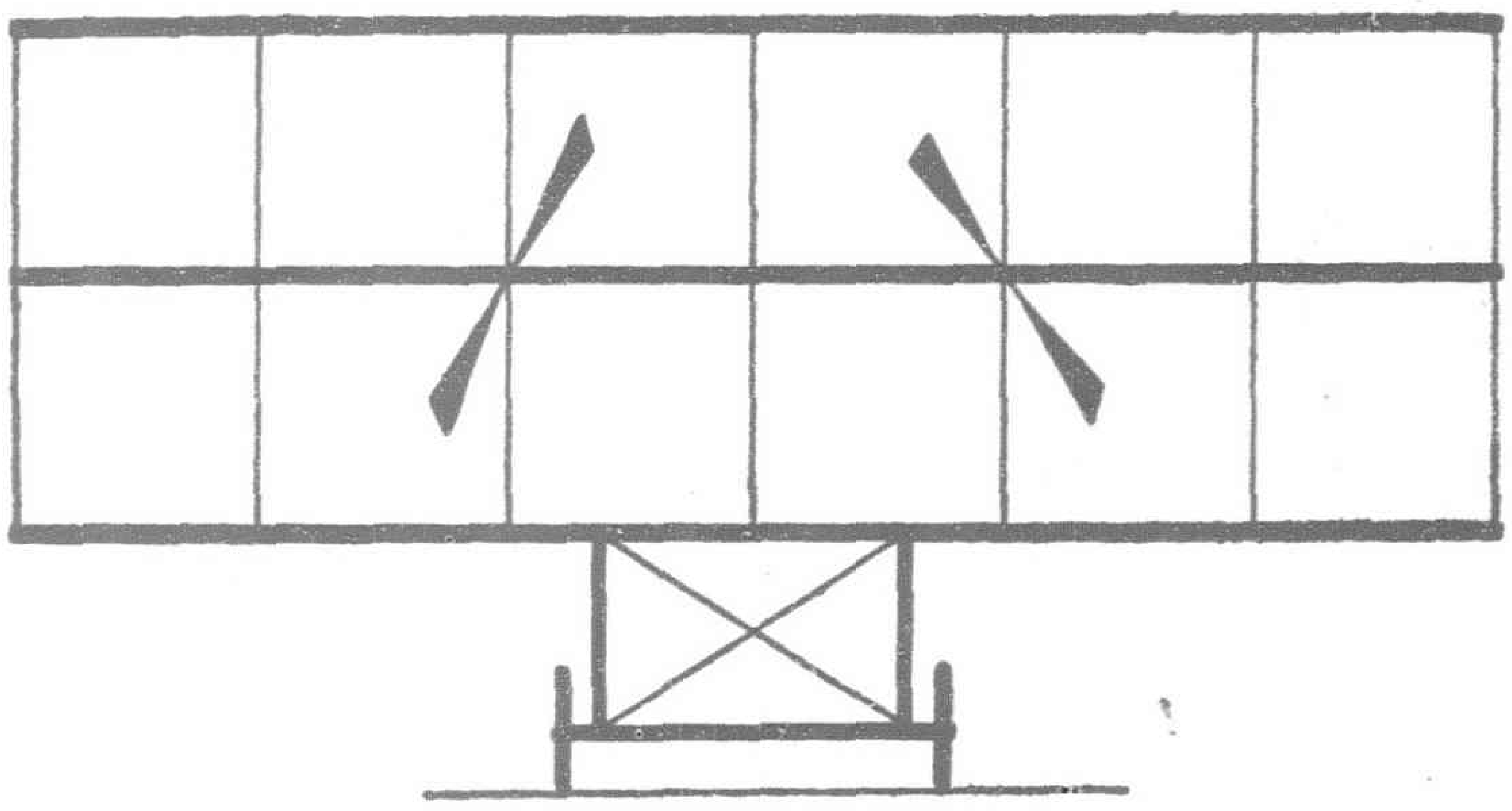


FIG. 3.—FRONT ELEVATION OF SUPERPOSED TRIPLANE

Such problems require to be worked out to suit the purposes of individual machines, the main point to be remembered being that the load carried bears a fixed relation to the length of entering edge—if we require to double the weight-carrying powers of an aeroplane its entering edge must be twice as long. At the same time a similar effect can be obtained by increasing the velocity since the additional impetus given to the air will impart to it a greater amount of weight-carrying power. According to Maxim double the speed gives four times the lifting effect and consequently the greater the lifting effect in proportion to the power employed.

This reference to velocity now raises an interesting point in connection with engine size. It is a curious fact that there is a certain speed to which every aeroplane can be driven, but beyond which no effect is obtained by increasing the output of the engine except to lift the machine. In the previous notes I have endeavoured to make it understood that angle of incidence is the factor upon which speed more or less depends. As the speed rises the angle decreases until at its highest flying speed the machine assumes an almost horizontal position where the centre of pressure on the plane is very near the front edge. If the aeroplane was forced beyond this critical point the centre of pressure would creep right to the front edge and then over it onto the top surface causing the machine to take a dive—which would possibly end disastrously as the pilot has no means of correcting it. If the engine speed is simply increased and the machine allowed to take its own course the natural effect is that the planes, having already reached the limit of their practical flying angle, will be forced upwards by the banking of the air. Of course—if the driver is addicted to that particular form of amusement—he might hold the machine's head down by manipulating the elevating rudder, but, as I have already pointed out, the only result of such a manoeuvre would be to cause the centre of pressure to change to the top of the plane and the aeroplane would drop like a stone.

Stability.

Undoubtedly the crux of the whole of the aeronautical question lies in the matter of stability, and on no other point is there such a divergence of opinion even amongst the recognized authorities. Consequently "where doctors disagree" the present writer will confine himself to stating general principles only without hazarding any personal opinions.

Considering that longitudinal and lateral stability are affected only by wind variations, it would be possible to obtain natural stability of an aeroplane if a speed could be obtained that was greater than that of any natural current. For this Lanchester says that 90 miles per hour would be sufficient. The weight of a machine capable of travelling at this pace would be very great and it is calculated that its momentum would be sufficient to carry it safely through adverse winds. At the moment, however, this is not practicable, in addition to which there are very few people who have any particular desire to fly at such a speed—so we must consider the matter from the present point of view. Automatic stability is a very big problem and it does not appear in the least likely to be solved for quite a long time to come. In the meantime the next best thing to waiting for its arrival is to construct machines as inherently stable as possible and depend on human skill for the rest.

Inherent stability in the line of flight may be attained to a certain extent by affixing a tail at some distance behind the main planes (Figs. 5 and 6), its effect being to damp any small oscillations caused by speed or wind variations. Whether a device of this kind is really an advantage or not is a matter of opinion since it must necessarily slow the machine, but at the same time as the oscillations take a longer time to affect the balance the driver has more time to think and act. The French school of thought favours a combination of tail and hand-controlled devices, but the American school (headed by the Wrights) prefer to depend on hand control entirely.

This hand control takes the form of a small horizontal plane fitted, on biplanes, in front of the machine (Fig. 5), while on the monoplane type of craft it is arranged beside the tail (Fig. 6). The amount of leverage obtained varies, of course, in proportion to the distance it lies from the centre of lifting effect but, as the strain on the small plane is very considerable, the struts holding it down must necessarily be made very strong and heavy. The elevator has the work of carrying the weight of these struts and consequently a definite limit is imposed on its distance from the main planes.

When pointed downwards the elevating rudder offers sufficient resistance to the air to drag the nose of the machine downwards, while in the opposite position the aeroplane tends to rise.

The lateral stability can also be rendered automatic to a limited extent by setting the two halves of each single span at a slight dihedral angle (Fig. 1). When a machine so equipped heels over the lower of the two sides sets up a greater amount of resistance to the air than the higher side and there is a distinct tendency for it to right itself—the action being somewhat similar to that of a boat when it rolls. A hand trimming device is necessary however and usually consists of a pair of small planes attached to the main wings and capable of movement in opposite directions. In the Wright machine the tips of the main planes are warped instead.

When a gust strikes the aeroplane on (say) the off-side the machine will tilt over bodily in the opposite direction. If at this moment the movable tip on the near side be depressed (and the other raised) the resistance of the near side will be increased and it will rise.

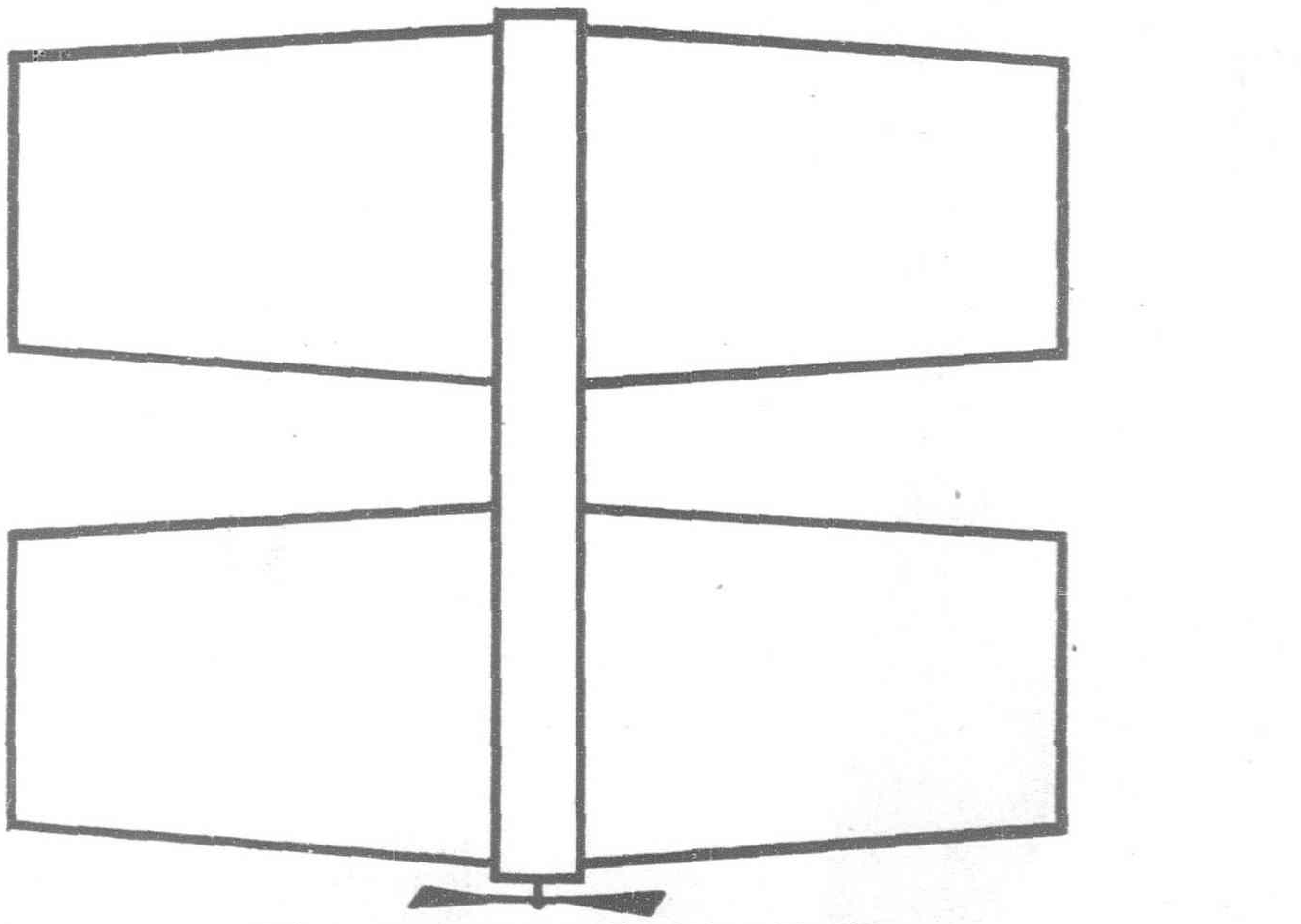


FIG. 4.—PLAN VIEW OF TANDEM BIPLANE

Turns are effected by means of an ordinary vertical rudder (Figs. 5 and 6) which the driver puts over in the desired direction. When the machine swings round, however, the outer edge of the wings tilt upwards because of the fact that they are travelling at a greater speed than the inner edge and consequently creating more wind support. To check this tendency the ailerons (as the wing tips are called) are dipped on the lower side while the turn is being made and as the resistance is thereby increased at that point the machine does not overbalance.

Air Speeds.

Although the speed at which an aeroplane travels is generally calculated in miles per hour, it must be remembered that this is not equivalent to a corresponding number of miles per hour on land because the rate of travel of the surrounding air has to be taken into account. For instance, supposing that we have an aeroplane capable of accomplishing a speed of 50 m. p. h. in calm weather it follows that if a wind of 30 m. p. h. is blowing against it the actual rate of progress will be 20 m. p. h., or if a gale of 60 m. p. h. is blowing the machine will "progress backwards" at the rate of 10 m. p. h.

Similarly if the aeroplane has the wind behind its speed will be equivalent to the speed it is capable of making plus the speed of the wind. If it is travelling at 50 m. p. h. and a 30 m. p. h. breeze is blowing the rate of travel will then be 80 m. p. h.

This peculiarity of flying speeds has given rise to a curious misunderstanding regarding the question of "hovering." Owing to the fact that at certain recent aviation meetings the aeroplanes appeared to be standing still (because of the wind speed and the machine speed being approximately equivalent) the impression gained was that some aeroplanes were capable of remaining motionless over one spot. It must be remembered, however, that the engines were kept running all the time for if they were stopped when aloft the machine would be blown backwards. If the wind and aeroplane speeds are the same, although the machine itself does not actually progress yet it is making a steady speed through the air which is equivalent to the speed of the wind.

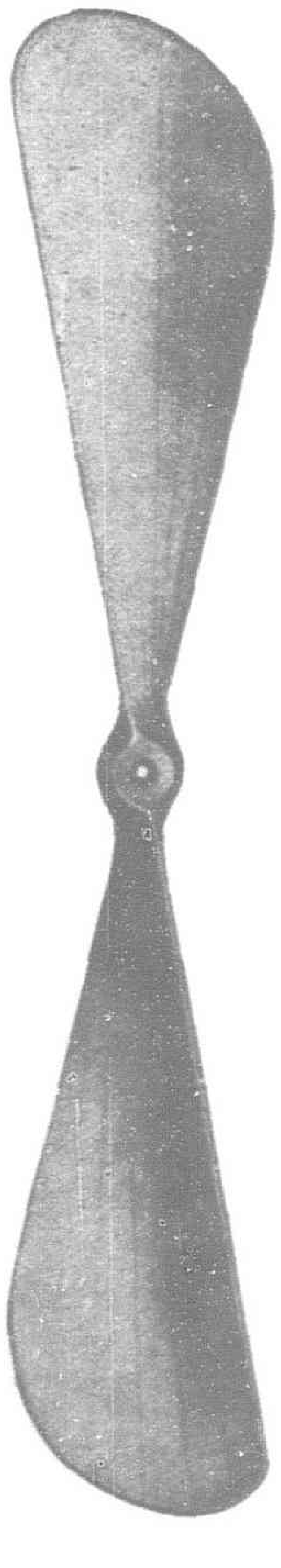


FIG. 8.—A CHANVIERE "INTEGRAL" PROPELLER

A precisely similar effect is experienced at sea. If a 10-knot boat is running against an 8-knot current it is really only doing 2 knots per hour. If the speed of the current is 10 knots the boat will remain motionless so long as the engines are kept working. If the current was 12 knots and the boat still headed against it the rate of progress would be 2 knots per hour, but backwards. On the other hand if the boat is running all out with a 12-knot current in its favour its speed would be 22-knots per hour.

Constructional Details.

In addition to those particular points already enumerated there are a number of constructional details which require very careful attention to secure the highest degree of efficiency in working. Chief of these is the question of skin friction of the surfaces and, although authorities differ as to whether it is really of very great moment, there can hardly be any doubt that a well-designed smooth-surfaced plane is bound to give better results than one which is roughly made. Observation of the leading machines shows that some are extremely well-finished in this respect while others are just the reverse. On the original Wright biplane a canvas material was used which, although waterproof, was not smooth. Bleriot uses a beautifully made material proofed on both sides with rubber and most of the later aeronauts have followed his example. Such cloths are now made by the big tyre manufacturers.

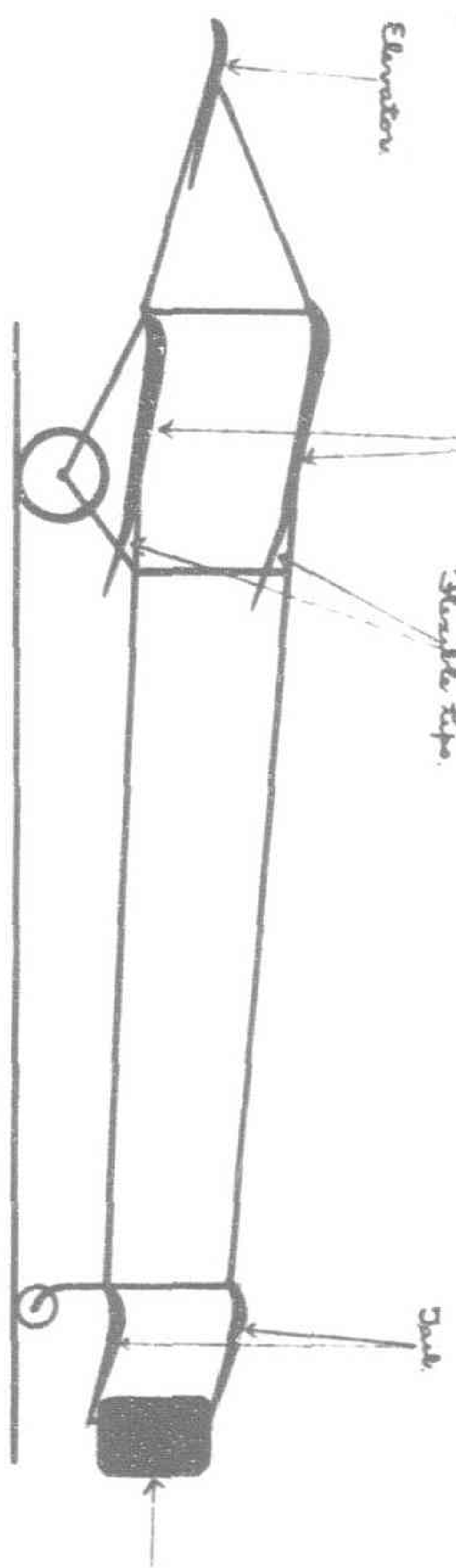


FIG. 5.—DIAGRAMMATIC SKETCH SHOWING ARRANGEMENT OF CONTROLLING DEVICES ON A BIPLANE

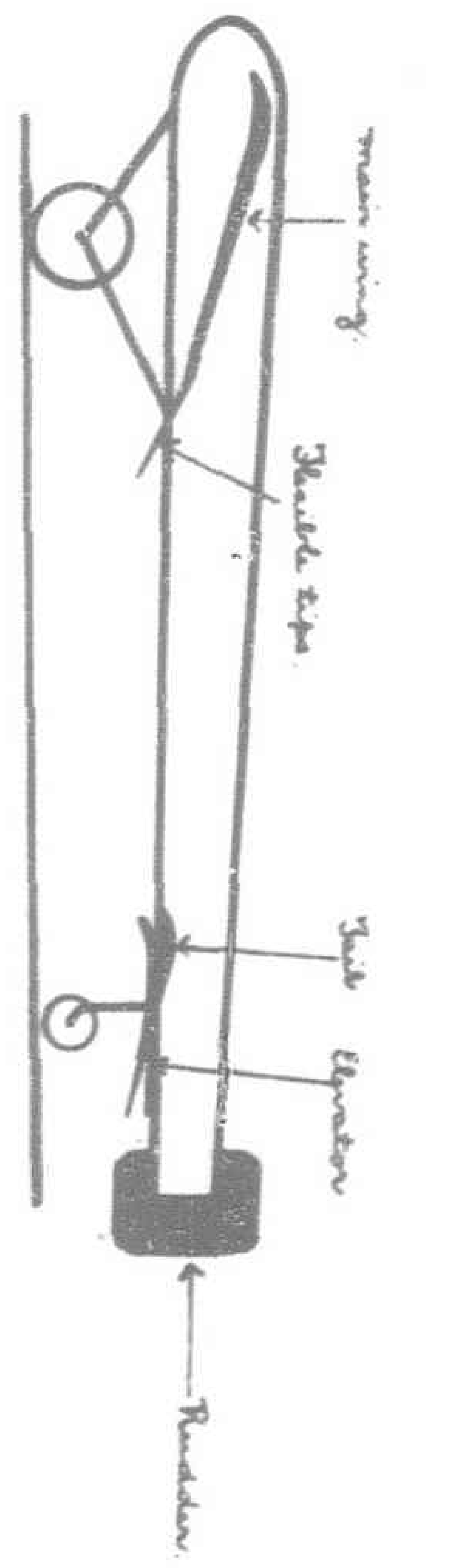


FIG. 6.—DIAGRAMMATIC SKETCH SHOWING ARRANGEMENT OF CONTROLLING DEVICES ON A MONOPLANE

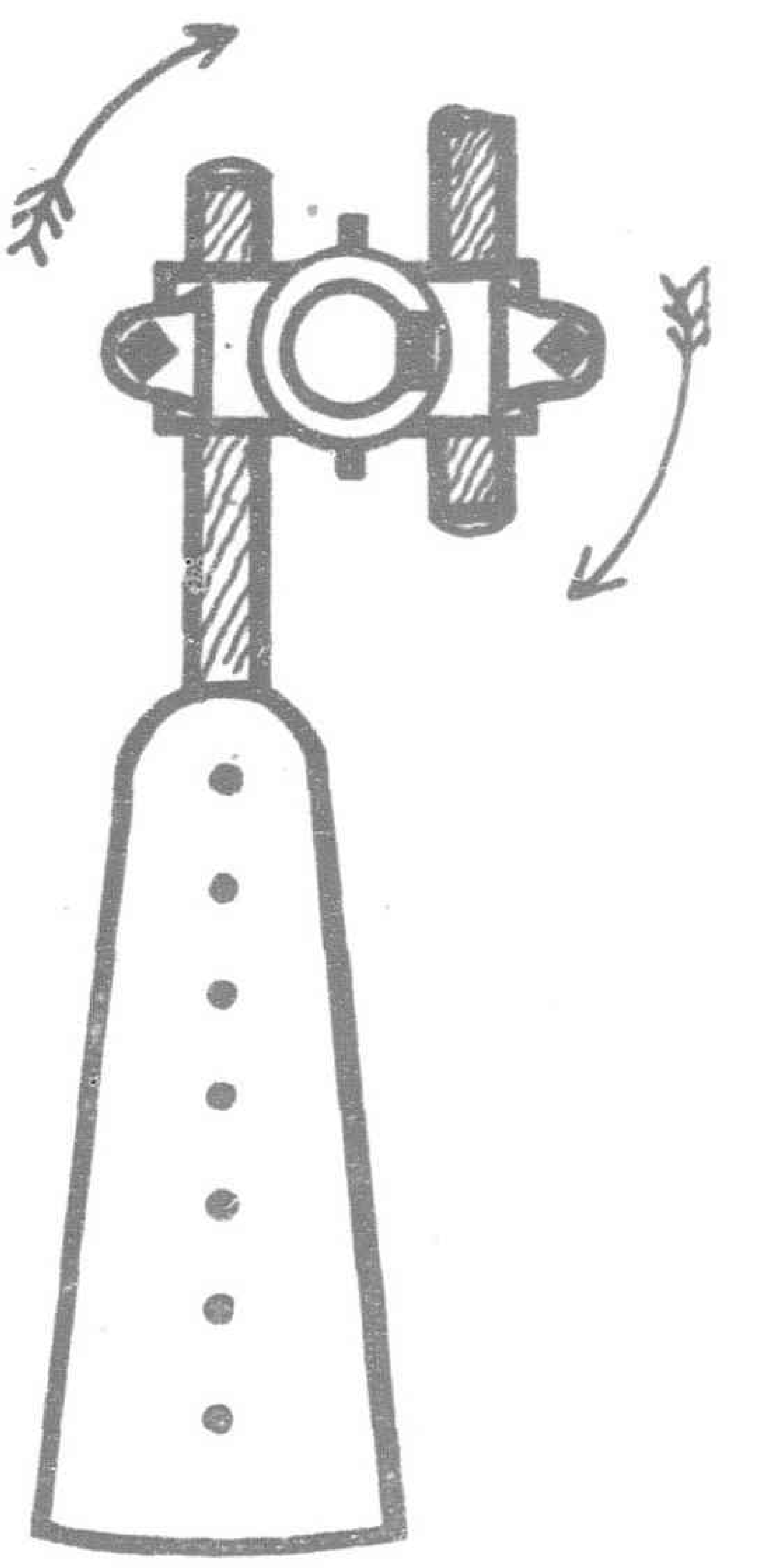


FIG. 7.—THE VOISIN ADJUSTABLE PROPELLER

Since the resistance of an aeroplane increases as the square of its velocity all the struts and stays of the framework should be so designed as to offer the minimum amount of resistance. It has been proved by experiment that the ideal form is more or less fish shaped—that is, having a bluff entry and a very fine run aft. The shape of the body of the monoplane shown in Fig. 6 gives some idea of this particular form.

Next to stability propellers are perhaps the most disputed point in the whole question of aeroplane design and rightly too when one considers that the success of the machine depends almost entirely on their efficiency. Propeller design is a branch of aeronautics entirely by itself, and a very highly mathematical one at that, consequently the prospective aeroplane constructor would be well-advised to buy his propellers from one of the big makers rather than waste time and money in experimenting with them.

The Voisin brothers fitted a very crude type of propeller (see Fig. 7), made of two sheets of metal rivetted to an iron bar, on their early biplanes. Both blades could be adjusted for pitch and diameter by means of the special hub-fitting shown in the illustration. The efficiency was only about 40% however, probably because of the flat-shaped blades and the air disturbance created by the iron arms on the backs.

Bleriot's monoplanes are fitted with wooden propellers (Fig. 8), having curved blades and a fixed pitch. They are built up with a number of pieces of French walnut, then covered with fine canvas and highly varnished. The idea of the canvas covering is, of course, to prevent "fraying" at the edges. Their efficiency is said to be as high as 68%, and this seems not improbable in view of the wonderful performances made on the Bleriot machines.

(To be continued.)

INDUSTRIAL DEVELOPMENT IN THE PHILIPPINES

Since assuming the duties of Executive of the Philippine Islands, His Excellency, Governor General Forbes, has devoted all his efforts to the encouragement of greater effort in the different departments of industry. In this program he has received the support of the great majority of progressive Filipinos as well as foreigners and Americans in the islands. However, there is a voice raised occasionally in opposition to the administration policy that is far from harmonious and which sometimes finds willing ears in the United States. An instance where an effort has been made to embarrass the Philippine administration is that of the protest raised by Congressman Martin of Colorado against the sale of a large tract of wild land in Mindoro to the Mindoro Sugar Development Company. There is little doubt that had the gentleman from Colorado been familiar with his subject, he would have refrained from actively participating in a controversy the end of which would surely make him ridiculous. But he received an endorsement from Manila in the form of a resolution adopted at a meeting of a limited number of agitators who never engaged in agriculture and whose interest in the healthy development of the country has never been a matter of record. This questionable encouragement was all Mr. Martin, in his ignorance of conditions, thought necessary to authorize him to add a few charges against officials to his original quota, all of which were as unfounded as the former. In the meantime, while the matter was being thoroughly aired, the agitator class were encouraged to greater activity. The inclusion of the Moro Province and other sections of Mindanao within the jurisdiction of the Philippine Assembly was agitated. Mindanao, with the exception of a couple of provinces, has been governed directly by the Commission for the reason that a strong central force was necessary to maintain order among the Mahomedan and pagan tribes in that region.

Governor-General Forbes believes in the settling of the country and the development of the jungle before any consideration be given a change in the political status. But the agitation has been so continued that the few scattered natives in the Moro Province have become imbued with the false doctrine and, heedless of the disaster to themselves that would surely follow, have set themselves the task of importuning the government for a change in the political status.

It is gratifying to note the firm position taken by the Governor-General at this time. This may best be shown in an address made by him at Zamboanga, where he gave the political agitators a characteristic answer which ought to be final and at the same emphasized his well-known policy of industrial development. He said in part:

"I am sorry that none of the distinguished Filipinos who have come here to greet me today have presented any suggestions or arguments touching any of the real points at issue in this province; that they have not shown me how I can assist them in bettering their condition by increasing the prosperity of the province. The real problem before the Philippine people is not their political status; that is fixed both here and in other parts. The real problem is the industrial development, and by industrial I mean agriculture, manufactures, and commerce. What we want to do is to increase the products of the Islands, and my advice to this distinguished gentleman who has been talking to us, and to his friends and other people who have been thinking about political changes, is to get busy and devote their attention to the practical questions confronting us—things for which there is something to be done. I have come here to do what I can to help the people to better their condition, to increase the products of rubber, hemp, cocoanuts, sugar, tobacco, lumber, and other things by which money can be made. I want to have, when I come again, Filipinos crowd round me and present suggestions of ways to enable the people to live better, have better houses, better food, and better clothes. No change in the civil status of the government will do that. The government is good enough now; it is all right. To those of you who doubt whether it is a civil government or not, I wish to state that the present government of the Moro Province is purely civil; that General Pershing, although he holds military rank, is a purely civil official in so far as he is governor of the province. I am also happy to inform you that I have found that General Pershing and I are in complete accord; that our views are the same; that we have agreed upon the policy which we will pursue, and anything he says may be taken as being an exact expression of my ideas.

"I liken the improvement of Manila and the means of communication coming in and out of Manila to making sure that the heart is all right. Manila is the heart of the whole archipelago. I am speaking now commercially. Getting the valves and veins and everything working right in the heart will stimulate the movement of that part, which will throw the blood strongly, making it reach every part of the body, to the benefit of the whole. For that reason I think we can not devote ourselves too carefully—and I have devoted my attention to this for the last five years—to making sure that we can handle goods in Manila cheaper than in other places. I want it to compete favorably with the ports of Hongkong, Singapore, and the other ports of transhipment. We have no harbor dues; we have very low wharf dues and that sort of thing. The figures which were presented to me by the collector of customs for the amounts to be charged for the use of wharves I cut in half, although he said he could not cover operating expenses. I told him that we have got to have the port running at a low cost to shippers. I want them to know that the cost here is less than elsewhere. He pointed out that the figure he suggested was about one-half that of other places and one-fourth that of New York. Nevertheless, we cut his figures in two. We want to make the Philippines a place where the captains will all say, 'Take me to Manila.' Heretofore, when I came out here and I believe the practice still exists in some ports, officers of the steamships would try to avoid coming to the Philippines."

Needless to say, the address was welcomed by the progressive settlers of the Moro Province as well as the commercial interests throughout the islands. It settled definitely the status of that important section of the islands that is just beginning to receive attention and has promise of a great future under the firm yet liberal government established there. To change the status at this time would only result in creating a feeling of insecurity and discourage investment and colonization. The Mahomedan and wild tribes are now kept well under control by United States troops supplemented by Philippine Constabulary, but should there be any change that would retire the military from the control of that territory, there is no doubt but that the settlements would soon be wiped out.

As regards the Mindoro land deal, it seems strange that any objection should be raised to the desire of the government to encourage the increase of the acreage of sugar. The land had lain idle for years and the government was obliged to pay interest on bonds representing the purchase price since it was taken over from the religious corporations. Every effort had been made to induce settlement by natives but without success; and when a purchaser appeared having sufficient capital to make 52,000 acres of jungle a producing area, the Government did not hesitate to sell. Indeed, if it had refused the offer, then the spirit of policy of advancement, of progress, of development and of ultimate prosperity, with which Governor-General Forbes is identified, would have been violated. The sale of the Mindoro jungle and the address of the Governor-General at Zamboanga are both conclusive evidences of his consistency and his sincerity.

THE SZECHUEN-HUPEH RAILWAY QUESTION

The following copy of an "Open Letter" to the *North China Daily News* has been received with a request for its publication:

"THE SZECHUEN-HUPEH RAILWAY

(An open letter).

TO THE EDITOR OF THE
N. C. Daily News.

SIR:—

"In your issue of April 7th there was published a long communication from a Chengtu correspondent on the subject of the Szechuen Hupeh Railway. In the letter he makes among other statements the following regarding the accounts of our railway: that the accounts succeed in obscuring many points, but give no balance sheet which could be understood by any auditor; that one does not know what to make of these entries (on Interest and Mint), or how to reconcile the amounts—especially under Mint; that there are two hundred employees filling no less than 122 different offices; and that nothing has been done in the way of construction and yet between five and six million taels or over a third of the total capital has disappeared, etc., etc. It is not difficult for me to appreciate the underlying motive of the writer, who is evidently under the impression that if he succeeded in discrediting the purely Chinese commercial roads, perchance they might by agitation be transformed into loan railways. It is really hardly worth my while to enter into a controversy with your correspondent whose comments, not being based on facts, are utterly worthless. That his misstatements, however, may not deceive the uninformed readers of your paper, I venture to send you these lines.

"That there may appear (to foreigners) redundancy and overlapping in the entering of items on the balance sheet is a charge I am willing to admit, but to say that 'the accounts succeed in obscuring many points and give no balance sheet which could be understood by any auditor' is a deliberate falsehood. According to the Chinese system of keeping accounts, every sum of money that is paid out (no matter whether it is a loan or appropriation that has been repaid) is immediately entered under the head of 'expenditure.' The same sum when repaid appears again under 'receipt.'

"For instance, take the item Interest, which appears on both sides of the balance sheet. Interest was paid to the shareholders (Tls. 870,347) under 'expenditure' and was received from banks and other sources for capital deposited with them (Tls. 1,932;126) under 'receipt.') Instead of one entry for interest received less interest paid out, as would perhaps be done in a foreign system of accounts, in our system, two entries are necessary. Again, take the entry under Mint (Tls. 2,126,693). Because construction work on the railway had not begun and the amount collected on shares was very large, it became necessary that the money be invested, and so the two million odd taels was loaned to the Mint at Chungking. Soon after, the closing of the Mint was ordered, and the sum was returned to the railway, hence the same entry on the 'receipt' side of the balance sheet.

"Your correspondent, who did not take the pains to inform himself, was also puzzled with the items 'Native opium forced tax' and 'Opium lamp forced tax.' The fact is, when the Mint was closed up and had to repay the railway the two million odd taels advanced to it, the officials found that they were short of some six hundred thousand taels, notwithstanding the sums raised by the sale of the copper in stock, and two official appropriations. His Excellency Hsi Liang, the then Viceroy, therefore gave instructions that the shortage should be made up from the Native opium and the Opium lamp taxes. These taxes are a part of the provincial revenue, but have been set aside by the Viceroy to help pay the expenditures connected with the organization of the railway company. These taxes, however, cannot be regarded by the railway as a part of its regular income, until the indebtedness (six hundred thousand odd taels) of the Mint has been first cleared. Hence, the same item appears under 'Opium tax repaid to Mint' on the 'expenditure' side of the balance sheet. So much for explaining the balance sheet.

"Since the organization of the company the total expenditure up to the end of the fifth moon of last year amounted to only Tls. 1,373,302.00. Your correspondent was guilty of gross exaggeration when he wrote 'between five and six million taels or a third of the capital has disappeared.' Even by the Chinese system of accounting, which as explained above makes the totals very much larger than they really are on account of overlapping entries, your correspondent has intentionally or otherwise mentioned a sum nearly two millions more than that of our balance sheet. He was also guilty of hoodwinking your readers, because he omitted to point out that certain sums on the receipt' side have really the effect of cancelling items in the 'expenditure' column, thus reducing materially the totals.

"A word in reply to his stricture that there are 249 employees filling no less than 122 different offices. Your correspondent evidently was ignorant of the fact that the capital of the railway is largely land tax shares from the various districts. Now Szechuen has over a hundred districts; hence it is nothing extraordinary that there should be over a hundred offices.' Permit me to inform you further that each 'office' is allowed only Tls. 200 on very Tls. 10,000 worth of shares collected, and the allowance covers the expense of remitting the share money as well. I should like to be informed of a cheaper way of floating shares by any banking institution in foreign countries.

"Your correspondent further says 'For ten years the Chinese have decided to build the line themselves,...... There is, at the present moment, a great deal of frantic excitement and hysterical talk, all directed to fomenting the anti-foreign propaganda now in full swing. The ending results in the way of progress are very disappointing.' He concluded by saying that 'the powers that constitute the central government are making a great mistake in remitting the railway constructing policy of the Empire to the varying incompetencies of the Provinces. The line will have to come eventually under foreign expert and financial assistance or it will never be constructed.' From his words, one infers that he should like to see the railway rights of the whole Empire handed over to the foreigners, and I am astounded at his advocating such a policy. Now even in foreign countries in the construction of railways, whether the capital is to come from subscribed shares or from loans is decided by the condition of national finance. In the case of state lines, the capital generally comes direct from the state treasury, so that perfect control of the railways lies in the hands of the government. Where necessity demands the borrowing of foreign loans, the rights of control are impaired and interference in the financial management is a matter of course. As a further consequence the loan syndicate expects to have a voice in the employment of men and purchase of materials for the railway. The people of China, taught by the bitter experiences of the past, have unanimously demanded of the Government to permit the construction of provincial lines with provincial funds, and receiving the consent of the Government, we have organized various provincial railway companies. This movement is aimed at the preservation of our rights and has nothing to do with any anti-foreign propaganda. I had the honor to express this opinion in my speech at the annual meeting of the shareholders last year.

"The Szechuen Railway Company has on hand over ten million taels, and there is an annual income from shares and other sources of over two million taels. The Chief Engineer, Dr. Jeme Tien-yow, and the acting Chief Engineer, Dr. Yen Te-Ching, were instrumental in building the Peking Kalgan Railway, the success of which is known to every one. If they are not experts, who are experts? I fail to understand the meaning of your correspondent, when he says that 'this line will have to come under foreign expert and financial assistance, or it will never be constructed.'

"The other strictures of your correspondent have to do with administrative acts of the Company, which has full power to execute them in the manner it thinks best. Hence, it shall not be my purpose to notice them at all, no matter whether he misrepresented facts or not.

I am, etc.,

(Signed) Li Chi-hsun,

President of the Szechuen Railway Co., Ichang."

The correspondence published in the *North China Daily News* and to which the above refers, follows:

"THE SZECHUEN-HUPEH RAILWAY

From a Correspondent

Chengtu, March 9.

A CHINESE STATEMENT OF ACCOUNTS

"As you are aware, the loan for this railway has occupied the attention of all Europe and America as well as China for a very long period. It is to-day as far from a settlement as ever.

"For nearly ten years the Chinese have decided to build the line themselves. They have energetically endeavored to persuade investors to buy shares, they have also for years collected forced taxes, until the total sum from all sources has reached the respectable total of roughly Tls. 16,000,000, say £2,000,000. The subscribed shares are about 25 per cent of the whole, the remaining 75 per cent being forced taxes.

"There is at the moment a great deal of frantic excitement and hysterical talk, all directed to fomenting the antiforeign propaganda now in full swing. The ending results in the way of progress are very disappointing.

"I have been able through friends to get an original copy of the statement of accounts published in response to the popular clamour. They succeed in obscuring many points, but give no balance sheet which could be understood by any auditor, much less certified as correct as even establishing the actual and exact financial position. Let me quote some facts and figures.

"The documents showing the accounts, which I possess, are twelve very large sheets, and when spread out would cover the floor of an ordinary room. These accounts were only issued in January this year. Another group of shareholders are now working at them and a further statement is promised this year. In this way they keep themselves amused and employed while the funds daily grow less. Along these lines the railway will never be completed.

"A circular was sent out on August 26, 1909, registered at the Imperial Post Office, strange to say, as a newspaper, to the shareholders, inviting them to a meeting in Chengtu from November 26 to December 8, 1909. Some 657 men answered to their names when the meeting opened, these men came from widely scattered districts all over these Western Provinces. The delegates are paid from the Railway funds $2 a day travelling allowance and 50 cents a day for living expenses while at Chengtu. According to the regulations a shareholder must hold Tls. 2,500 shares to be entitled to vote and, in the case of a voluntary subscriber or shareholder, is limited to twenty-five votes, whereas the delegate representing the forced tax may cast an unlimited number at the rate of one for each Tls. 2,500. The Pahsien delegate as a matter of fact had 125 votes for the forced tax from that district, which shows a discrimination against the private shareholder as against the official representative of the tax contributions. When the tax receipts reach 50 millions the income from that source will cease, and the line will have to depend entirely upon the private or voluntary shareholders. Judging from the rumours that are going round the country, as expressed to me by several shareholders, I think it extremely improbable that they will raise from the public investor the 65 millions they have set out to get.

"The following is an abstract or balance sheet to which I append a few notes.

Dr.	Tls.
Shares privately or voluntarily subscribed	2,761,450
Forced tax shares (on land)	7,155,540
Native opium forced tax	892,973
Opium lamp forced tax	336,853
Interest on share capital	1,932,126
Interest on public funds	76,938
Copper coinage mint	2,107,304
Salt and tea taxes	94,088
Miscellaneous receipts-	29,921
Deficit copper mint	19,389
Tls.	15,405,952

Cr.	Tls.
Interest paid away	870,347
Convoys	214,410
Students	265,988
Inquiry commission	7,336
Purchase of implements	44,743
Salaries	192,455
Building	67,726
Surveys	108,400
Printing	86,820
Maintenance	10,592
Land purchase	21,922
Transport	5,197
Cost of remittances	69,768
Postage and telegram	9,237
Copper Coinage mint	2,126,693
Miscellaneous	256,754
Rent	2,902
Engineers Department	9,054
Opium tax repaid to Mint	613,652
Balance in hand	10,421,958
Tls.	15,405,952

Purchased Shares. These have steadily declined from Tls. 2,535,697 in the 1st year to Tls. 136,890 in the 2nd and finally Tls. 87,863 in the 3rd year. Subscription has now practically ceased and if one may believe the common rumours the public will have learned from the 600 odd delegates' reports something as to the real financial situation. These rumours have shattered public confidence.

"Indeed, a public official states to me that in his opinion they would never build the line and that in three years or five at the most the last step would have been taken when the aid of foreigners would have to be requisitioned.

"Forced Shares. The yield from this source, as it is a fixed compulsory tax, has been more or less regular.

"Opium Tax. The receipts from this source if the present prohibition policy is sustained will cease altogether.

"Interest and Mint. One does not quite know what to make of these entries or how to reconcile the amounts—especially under Mint. It is to be noticed, however, that the interest paid increases annually 1st year Tls. 160,376, 2nd year Tls. 243,681, 3rd year Tls. 466,269.

"Salaries. There are 249 employees filling no less than 122 different offices. If the Chinese are babes in railway matters they are expert past masters in this particular department and could probably give a good many points to home railway directors on the look-out for an opportunity to increase the number of its offices and fortunate holders of the same. What can possibly be the duties of all these offices and officers in a Railway which is still only 'n the air?'

"There are three General Managers drawing respectively Tls. 500, Tls. 300, and Tls. 200 a month. Three Inspectors of correspondence, etc., at Tls. 100 a month each. Three Managers at Tls. 100, Tls. 220 and Tls. 300 a month respectively. Also an agent at Hankow enjoying Tls. 300 a month. Possibly a part of his duties may be the maintenance of the agitation against foreign loans and interference at that point.

"The Engineers are remarkably well. Jeme's salary as Engineer-in-Chief is not set down, but the assistant chief Yen gets Tls. 810 a month. Engineer Lu gets Tls. 620 a month. Other engineers draw monthly pay as follows:

	Salary.	Travelling allowance.	Monthly Total.
Su	Tls. 250	$140	Tls. 350
Keng	250	105	325
Wen	200	173	322
Chen	200	Tls. 45	245

"The cadets get what is certainly princely salaries for Chinese youths, varying from $133 to $233 per month. All the highly paid men are Szechuanese to a man. Naturally all these are enthusiastic, as long as the funds last, for a Chinese railway as opposed to a foreign loan with all strictness of foreign oversight and control.

CONTRACTING NEWS

BIDS OPENED. SHANGHAI MUNICIPALITY.—20 Induction Motors.—Bid of Messrs. Jardine Matheson & Co., Ltd., accepted, Bergmann Motors, £855. 8. 3., delivery 20 weeks.

The remaining tenderers are as follows:

Name of Tenderers.	*Makers.*	*Delivery Weeks.*	*Price.*		
Samuel, McGregor & Co	Bergmann Electrizitats Werke	24 (*a*)	£ 789	9	3
"	"	24 (*b*)	807	11	6
Siemens Schuckertwerke	Siemens Schuckertwerke	18	845	5	0
Samuel, McGregor & Co	Bergmann Electrizitats Werke	24 (*c*)	880	11	9
"	"	24 (*d*)	947	7	0
Shewan, Tomes & Co	Rhodes Motors, Ltd	13	952	10	0
"	British Westinghouse Electric & Manufacturing Co	14	952	12	6
Shanghai Electric & Asbestos Co., Ltd	The General Electric	15	996	11	0
Ilbert & Co	Greenwood & Batley	15	1,064	7	0
Melchers & Co	Bergmann Electrizitats Werke	26	1,074	5	2
Arnhold, Karberg & Co	Allgemeine Electrizitats Ges	17-19	1,076	0	0
Brush Elect. & Eng. Mfg. Co	Brush Elect. & Eng. Mfg. Co	15	1,087	19	0
Brighten, Malcolm & Co	"	15	1,087	19	0
Andersen, Meyer & Co	British Thomson Houston Co	19	1,098	0	0
Samuel, McGregor & Co	British Westinghouse Elect. & Mfg. Co	18	1,104	3	8
Siemssen & Co. (The Lahmeyer Electrical Co. Ltd.)	Felten Guilleaume Lahmeyer Werke	18	1,204	12	0
Brown, Boveri & Co. (direct)	Brown, Boveri & Co	29	1,208	19	3
Von During, Wibel & Co. (Brown Boveri & Co.)	Brown, Boveri & Co	29	1,208	19	3
Lancashire Dynamo & Motor Co., Ltd	Lancashire Dynamo & Motor Co	11 & 21	1,324	0	0
John E. Hall	"	11 & 21	1,324	0	0
Jardine, Matheson & Co	Crompton & Co	15	1,327	6	6
Scott, Harding & Co	Lancashire Dynamo & Motor Co	17	1,410	16	6
"	"	17	1,497	9	0
Lancashire Dynamo & Motor Co., Ltd	"	11 & 21	1,510	0	0
John E. Hall	"	11 & 21	1,510	0	0
Scott, Harding & Co	"	17	1,588	8	6
"	"	17	1,683	9	0
Innis & Riddle	Langdon-Davies Motor Co	16	1,030	10	0
"	E. Brook Ltd., (portion of contract only)	12	115	10	0

LUBRICATING OIL ANNUAL SUPPLY.—Contract awarded Vacuum Oil Co. at following prices:

	Tls.	
Extra Hecla Cylinder Oil "B"	1.44	per Imp. gal. less 10%
Vax Cylinder Oil	1.14	" "
Vacme Polar Cylinder Oil	0.85	" "
Vacme M. Engine Oil	0.86	" "
No. 1 Crank Chamber Oil	0.82	" "
Vacuum Machine Oil	0.52	" "
Gear Grease	0.10	per lb.

The following are authorized for acceptance:—

For the annual supply of timber.

1.—The China Import and Export Lumber Co., Ltd., Oregon Pine and Singapore Redwood at prices as follows:—

Oregon Pine planks, Tls. 39.50 to Tls. 40 per 1,000 sup. ft.

Oregon Pine logs, Tls. 40 to Tls. 45 per 1,000 sup. ft.

Oregon Pine Red, Tls. 60 per 1,000 sup. ft.

Singapore Redwood planks, Tl. 0.55 to Tls. 1.35 each.

2.—Messrs. Jardine, Matheson & Co., Ltd., Hardwood and Foochow Poles, at prices as follows:—

Japan planks 7′ 6″ by 1″, Tls. 2.34 each.

Malava planks, Tls. 89.55 per 1,000 sup. ft.

Malava logs, Tls. 79.60 per 1,000 sup. ft.

Selangan Batu planks, Tls. 84.58 per 1,000 sup. ft.

Selangan Batu logs, Tls. 74.63 per 1,000 sup. ft

Foochow Poles, dimensions and prices as per schedule, and other dimensions as required at various prices.

BIDS OPENED. CHIEF QUARTERMASTER, MANILA.—One Ocean-going Steamer 1,000 to 3,000 tons. Following bids submitted:

Messrs. Wise & Co., bidding for the Shanghai Dock & Engineering Co., of Shanghai, bid on five steamers of the P. & O. fleet as follows: The S. S. *Java*, gross tonnage 4093.14 knots, $60,000, S. S. *Ceylon*, gross tonnage 4094, 13 knots $60,000, S. S. *Japan*, 4319 gross tons, 14 knots, $60,000, S. S. *Manila*, 4210 gross tons, 13 knots, $60,000 and the S. S. *Oriental* of 5284 gross tonnage, 15 knots, $100,000. Mr. James F. Macleod bid on two steamers of the Hamburg-American fleet, the *Loongmoon*, 1971 tons gross measurement, 13 knots, $85,000, and the *Lyeemoon*, 1925 gross tons, 13 knots, $75,000. Messrs. Smith Bell & Co., Ltd., bid also on two steamers offering the *Sungkiang*, gross tons 1622, for $52,000, and the steamer *Taisang*, gross tons 1544, for $40,000. F. T. Figueras bid for the sale of the Fiume, gross tons 1386, $40,000, and Messrs. Hidalgo, Cuyugan & Co. offered the *Atlant s* of 1528 gross tons for $50,000. The steamer *Rigel* of 758 gross tons was offered by Messrs. Pujalte & Co. for $51,000, and Gutierres Hermanos bid the *Magallanes* of 1321 gross tons in for $95,000. Messrs. Germann & Co., Ltd. one 10 knot steamer $146,970, one 12 knot steamer $174,780. Delivery to be made at Manila or Tsingtau.

SIX SCOW LIGHTERS.—Two 50 feet in length; four 80 feet in length. The Hongkong & Whampoa Dock Co. bid $3192 each for the two 50 foot lighters and $6084 for each of the four 80 foot scows. Built according to specification of Oregon pine and delivery of first lighter to be made in six weeks and on each week following, or all to be delivered in 11 weeks.

Messrs. Simmie & Pierce $2225 and $4325 each, Oregon pine construction, and delivery of first scow in 30 days and one every 12 days thereafter.

Fred Wilson & Co., representing George Fenwick & Co. of Hongkong, bid $4890 and $7375 each, and agreed to deliver 2 lighters in three and one-half months, 2 in 4½ months and the balance in 6 months.

H. Thurber offered to build the small lighters for ₱4475 and the larger ones for ₱7375 Philippine currency, delivery of all to be made in 180 working days.

John Gordon bid $1950 and $4500 respectively. Gordon asked for payments as lighters were finished and refused to accept less than 50% of the work. He agreed to deliver half in 90 days and the other half in 180 days.

The Atlantic, Gulf & Pacific Company were the next lowest bidders to Allen. Their bid was $1590, U. S. currency, for the small scows and $3948 for the 80 foot lighters. Oregon pine was the material offered and the company agreed to make delivery of 2 scows in 60 days, 2 in 120 days and 2 in 180 days.

Arthur F. Allen, who was the lowest bidder for the work of constructing the scows, bids as follows: Small scows ₱3,500 each and ₱7,400 each for the larger ones. Oregon pine or native wood at the same price that Oregon pine can be bought in the market. Delivery to be made 2 in two months, 4 in three months and 6 in four months.

HARBOR BOATS.—Messrs. Castle Bros.-Wolf & Sons, representing the Taikoo Dockyard Co. of Hongkong, bid $67,117.50, or two boats for $132,750. This firm agrees to deliver one boat in nine months and two in ten. They also agree to deliver the boat at Manila under her own steam The Kawasaki Dockyard Co., of Kobe, agree to deliver one boat at Manila in 14 months time for 278,500 yen, and the Mitsu Bishi Dockyard & Engine Works of Nagasaki agreed to deliver the boat at Manila in nine months time for 169,000 yen. Messrs. Findlay & Co., representing the Hongkong, Whampoa Dock Co. of Hongkong, bid $73,837, U. S. currency, for one tug and two for $72,710 each, delivery to be made in 7 and 8 months respectively. The Kiangnan Dock Yards & Engine Works of Shanghai agreed to construct one steamer for $75,000 and two for $148,000, delivery in 8½ and 9½ months. Messrs. Germann & Co., Ltd., representing Tsingtau Werft of the Tsingtau Docks in China, agreed to furnish a 750 horse power harbor boat for $93,170 at Tsingtau, or $95,122 delivered at Manila. If two boats were furnished a reduction of $3,000 would be made. The delivery to be made in 9 months on the first and the second four months later. Wise & Co., bidding for the Shanghai Dock Co., bid $74,700 for one and $141,930 for two, delivery to be made at Manila in 8 months.

3,000 RAILWAY SLEEPERS.—Tayabas Saw Mill and Lumber Company ₱1.60 each, Pagatpat, complete delivery in 100 days; Tuason and Sampedro ₱3.24 each Ipil, Yacal or Dungon, complete delivery in 100 days; Derham Bros. $.985 each, Montol, complete delivery in 10 days.

ONE MILLION FEET OREGON PINE OR LAUAN.--On the native wood Derham Brothers bid ₱35.80 f. o. b. at Port Bonga; the Cadwallader, Gibson Lumber company, ₱45.90 ex mill dock and ₱47.90 delivered at quartermaster's dock, and the Insular Lumber company ₱50 ex ship and ₱52.50 ex yards.

The Oregon pine bids were: Findlay, Millar Lumber company, ₱40.60; California Lumber company, ₱40.64; and the Export and Import Lumber company, ₱41.30.

1,500 POUNDS STEEL.—Contract awarded Messrs. W. F. Stevenson & Co., Ltd., on a bid of that company on American steel, railroad bridge grade, one fourth inch $.0373 and $.0362 for 3-8 inch, all other sizes $.03356, U. S. currency.

The amount of the bid approximates $30,000, U. S. Currency.

BIDS OPENED, BUREAU OF SUPPLY, MANILA.—40,000 tons of coal. W. F. Stevenson & Co., Ltd., bidding on Australian West Wallsend, Manila ₱10.73, Iloilo ₱11.23, Cebu ₱11.23, Jolo ₱11.54, Tacloban ₱11.54, Romblon ₱11.54, Balabac ₱11.54, P. Princesa and Zamboanga ₱11.54. Macondray & Co. Inc. bidding on Newcastle Wallsend, Manila, ₱10.58, Iloilo and Cebu, ₱11.83, all other ports ₱12.32. Their

FAR EASTERN RAILWAY NEWS

Japanese Railways.—The announcement is made that during the present year it is expected to complete a total of 192 miles of line which, in addition to the 6731 miles in operation at the end of 1909, will bring the mileage up to 6923. The program for 1911 represents 237 miles of construction. The following is the table of the construction for the present year:

	Mileage	Date.
Hokkaido Line	31.09	Sept.
Hokkaido Line	48.08	"
Gwan-Etsu Line	10.56	Oct.
Central East Line	7.53	"
Central West Line	7.11	"
Maizuru Line	26.07	Sept.
Sanyin East	4.77	Oct.
Sanying West Line	11.31	May
Sanyin West Line	2.41	"
Sanyin West Line	7.18	Oct.
Toyama Line	14.67	April
Uno Line	20.37	May
Total	192.10	

And the program for the period commencing January 1st, 1911, is given by the *Financial and Economic Monthly* as follows:

Lines	Running Mileage	Construction Expenses	
	mile	*yen*	*yen*
Hokuetsu	15.69	2,218.197	139,860
Kyushu	48.69	8,430,528	172,757
Bo-So	46.43	6,442,916	138,438
O-U	92.16	14,984,457	162,521
Hokkaido Sorachi Coast	36.68	5,040,860	136,754
Kyushu	32.20	7,188,472	222,898

Japanese Railway Plant.—The program of the Railway Board includes the construction of a large plant for the manufacture of general railway supplies at Omori. The site will cover an area of about 60,000 square yards, and have three times the capacity of the plant at Shimbashi. The machinery from the latter will be transferred to the new plant and an addition of modern machinery will be added.

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bid on Japanese Ochi was Manila ₱9.14, Iloilo and Cebu, ₱10.73, all other ports ₱12.74. Smith Bell & Co. bid on Australian Seaham as follows: Manila ₱10.94, Iloilo ₱12.035, Cebu ₱12.06, Jolo, Tacloban and Romblon ₱13.13, Balabac and P. Princesa ₱28.44, Zamboanga ₱14.93. Mitsui Bussan Kaisha bid on Japanese Tagawa, Manila ₱10.65, Iloilo ₱12.50, Cebu ₱12.10, Jolo ₱13.80, Tacloban and Romblon ₱12.70, Balabac, Puerto Princesa and Zamboanga ₱13.10. T. Figueras bid on Australian Pacific, Manila ₱10.45, Iloilo and Cebu, ₱11.15, all other ports ₱11.25. Ker & Co. bid on Mount Kemblar, Osborn, Mount Pleasant, Wallsend. Metropolitan and Coal Cliff as follows: Manila ₱10.06, Iloilo and Cebu ₱11.16, Jolo, Tacloban and Romblon ₱13.395. No bid on other ports. Messrs. Behn, Meyer & Co., Ltd., bid on Lauban coal as follows: Manila ₱8.83, Iloilo ₱9.53, Cebu ₱9.33, all other ports ₱9.63.

Proposals for Fire Hose.—Shanghai Municipality.—Bids opened, July 16.

2,000 ft. 2½ in. Double Jacket Cotton Para Rubber lined Fire Hose in 50 ft. Lengths, uncoupled.

2,025 ft. 2½ in. Flax Machine-made, Canvas, Unlined, Fire Hose in 75 ft. Lengths, coupled; couplings to be expansion ring pattern, gunmetal, V right hand threads, 5 threads per inch, 3¼ in. ext. dia. and to be provided with two lugs ¾ in. dia., ⅞ in. length.

Proposals for 10,000 Cubic Feet of Teak.—Bureau of Supply, Manila. Bids opened July 20. Dimensions must not be less than 14″ square and 16′ long.

The Antung-Mukden Reconstruction.—It is expected that over fifty miles between Antung and Chihkwanshan will be completed and in operation by October this year. The broad gauge has been laid for 25 miles between Mukden Shihchiaotsu. The material is secured from the mountains for grading and brickyards are established along the right of way. The work on the tunnels, the most difficult part of the construction, is being pressed. There are 25 in all aggregating about 9,000 yards. Of this length about 8,000 yards, including the Taling tunnel, have been completed. The construction of the Antung-Mukden line, says a Japanese exchange, is to be completed by August 1911, and the Yalu bridge is also to be finished within next year. When Mukden and Fusan are thus linked, not only will the line become a highway for traffic between Japan and Russia, but a new way will be opened to Peking by connecting the line with the Peking Mukden road. By the Fusan-Mukden road, Mukden will be reached in 43 hours from Moji, against 60 *via* Dairen, where also a further delay may occur in making the connection between steamer and train. Moreover, it is only natural that people should prefer to travel by rail than by steamer.

International Through Traffic Agreement.—The South Manchurian Railway has been advised of the conclusion of the conference between the Russian and the Japanese representatives and has announced the result as follows: With regard to through freight the principles adopted were along the lines of the Berne convention with such modifications as conditions in Manchuria required. That the traffic should be organized by combining the prevailing tariffs of the South Manchuria and the Chinese Eastern Railway, and that special rates should be allowed only on timber, flour, spirits, cement, butter, and salt fish from the Chinese Eastern Railway and coal, cement, vegetables, fruit and fresh fish from the South Manchuria Railway.

The Tiehling-Hailungcheng Railway.—Preliminary surveys are being made by a Chinese engineer for this line which, when completed, will serve the region now tapped by the Sungari River and secure a large share of the trade that now goes by way of Kirin. The line will tap Kuanchieh and Menhkiang, situated on the upper reaches of the Sungari and Panshihhsien, Chaoyangchen, Liuhohsien, Taolu, and Utung, all situated on the Huifa and Itung Rivers.

Hongkong-Canton Railway.—There is every indication that the line to the Kowloon boundary will be completed by July 1st. The Chinese section will be greatly expedited by the facilities provided by the British section when completed for the carrying of materials, etc., for construction work from the Kowloon end. It is expected that the Chinese section will not be completed until about August 1911.

The Canton-Macao Railway.—The announcement is made from Peking that the Portuguese Minister has again opened the question of completing this line. It will be remembered that an attempt was made recently to secure permission to complete the line with Chinese and Portuguese capital. It is understood that the proposal is now meeting with favor.

The Yunnanfu Railway.—The *Avenir du Tonkin*, commenting on the disappointment of Haiphong in the small increase of traffic following the opening of this important road, declared that the high rates charged by the company are responsible.

Harbin-Hsui Hua-Hai Lun Railway.—Advices from Harbin are to the effect that the National Communication Bank and the Kwang Hsing Co. have expressed their willingness to finance the construction of a line of light railway to cost Tls. 5,000,000. The line will be 150 miles in length and serve to carry cereals to the interior of Mongolia as well as to tap the wealth of that region.

South Manchuria Railway Receipts.—Passenger receipts for April this year amounted to yen 337,277 and freight yen 753,678, a decrease of yen 126,900 compared with the returns for the corresponding term, 1909.

The Inter-Indo-Ceylon Railway.—This enterprise which is to place Ceylon in connection with India is to receive attention this year. An appropriation of £300,000 has been made, of which one-third will be spent this year. The sum of £100,000 will be expended in the completion of the Pampam Viaduct and the bridge joining the island of Rameswaram and Mandapam.

The Lokyang-Tungkwan Railway Finance.—A report from Peking is to the effect that Mr. Straight has arranged to take up the loan for Tls. 5,000,000 to finance this line. It will be remembered that recently arrangements were practically concluded with the Kungyi Bank for the latter to advance the sum needed. It has been announced that the latter's inability to raise the money is responsible for the negotiations towards an American loan.

New Locomotives for the Shanghai-Nanking Line.—According to the *N. C. Daily News*, the management of the Shanghai-Nanking Railway has placed an order for four express passenger tender locomotives of the 4-2-2 and 6 type with Messrs. Kerr, Stuart & Co., Ltd., of the California Works, Stoke-on-Trent, who established an office here in March last. The contract means a record in construction, as two of the engines have to be completed in forty-five days. But for a few minor details, these engines are identical with the famous single-driver locomotives of the Midland Railway, which are booked to do the journey between London and Nottingham at an average speed of 52.5 miles per hour, and whose actual running speed ranges from 52.8 to 55.68 miles per hour with a load of upwards of 200 tons. As there are no steep gradients on the Shanghai-Nanking Railway, such as exist on the Midland Railway, the engines now on order are expected to give even better results than those mentioned above. Messrs. Kerr, Stuart & Co. have received a similar order from the Chekiang Railway for engines of the 4-4-0 and 6 type.

Profits of Chinese Railways.—The net profits for the year 1909, according to the correspondent of the *Jiji Shimpo* at Peking, amounted to Tls. 6,400,000. The *Jiji* says that out of the ten Chinese railways two, namely, the Kyukiang and the Pinghsiang, show accounts which balance exactly, neither profit nor loss being in excess. Six of the roads show a net loss of 2,600,000 Taels; and two, namely, the Peking-Hankow and the Peking-Mukden, show a substantial profit. The figures work out as follows:—

	Taels.
Peking-Mukden Gross Earnings	12,000,000
Peking-Hankow Gross Earnings	9,600,000
Total	21,600,000
Gross Expenditures on the above two lines	11,600,000
Net profits on the above two lines	9,000,000
Losses on six roads	2,600,000
Net profits over the whole system.	6,400,000

Inspection of Railways.—According to the Peking correspondent of the *N. C. Daily News* the Yuch'uanpu was recently ordered by decree to inspect the Fukien, Chaochou-Swatow, Sunning and Huichou-Chaochou railways; and the result, as reported by the Ministry, shows that altogether the proposed railway lines in the Fukien province amount to over 2,000 li, but the line from Changchou to Amoy, 90 li, is first to be built. The line has been completed for ten or twenty li, and construction work, such as embankments or bridge building, is proceeding for the rest of the line. The line is level and straight and the construction is substantial. The subscribed capital is to be Tls. 1,370,000 and funds are required. With regard to the Chaochou-Swatow Railway it is reported that the length is eighty-five li, and that the line has been completed. The stations and cars are satisfactory, but the locomotives are not of the best pattern. The paid-up capital was $3,024,000 but $3,123,000 has been expended. After deducting cost of maintenance the receipts would pay about one per cent interest. The Sunning railway is to run from the Sunning city to the Kungyi Port, a length of 122 li, and it was completed last year. The paid-up capital was $2,740,000 and the actual capital expended was $2,500,000, leaving a surplus. The dividend is 2 or 3 per cent. The Chaochou-Huichoufu line was abandoned owing to the share holders breaking up.

THE CHEFOO-WEIHSIEN RAILWAY.—According to the latest advices, the required deposit of $3,000,000 has not been made up according to the instructions of the Governor of Shantung and the promises of early construction on this proposed line are far from bright. This condition was imposed by direction of the Board of Communications when the request for permission to inaugurate this line was made. It is understood that only $1,700,000 are available. An endeavor is being made to secure the necessary subscription to make up the deficit.

HULAN-TUNGKENG RAILWAY.—Viceroy Hsi, according to advice from Mukden, is preparing a memorial to the Throne to secure sanction for the construction of a light railway between Hulun and Tunkeng, a distance of 117 miles, at an estimated cost of one million yen.

PHILIPPINE RAILWAY CONSTRUCTION.—The line is now within a mile of Dao, Panay, which brings the construction from either end of the line within six miles of each other. The equipment for driving piles for the bridge over the Dao River was taken over the track.

The company has inaugurated an automobile service over fifteen kilometers of line connecting Janiuay and Pototan, the latter being a station on the Panay line and situated in a thickly populated district. The fare is forty centavos over the four zones in which the extension is divided. Through rates to any point along the line for passengers and freight have been issued.

THE KIRIN-CHANCHUN RAILWAY CONSTRUCTION.—Recent reports are to the effect that the rails for this line will be supplied by the Hanyang Iron and Steel Works. The work of construction is now progressing. Japanese and Korean laborers are employed.

THE HUNAN RAILWAY AGITATION.—An indication of the attitude of the Honan Chinese towards foreign railway loans may be taken from the following dispatch from Peking:

On the 21st May Li, a representative from Hunan to get sanction for the rejection of the foreign loan for railways, seeing that a certain Peking newspaper published a report that Hunanese in Canton have approved of having a foreign loan for Hunan railways, felt indignant and wept and cut one of his fingers and wrote with blood "Railways in Hunan should not borrow loans and I hope the Grand Secretary (Hsu Shihchang) will maintain that view" in fifteen Chinese characters and presented the writing to Hsu Shih-chang, the President of the Board of Communications. President Hsu was much affected.

PEKING RAILWAY NEWS.—Application was made to H. E. Hsi Lia Liang, Viceroy of Manchuria, by the Russian Consul at Mukden proposing the construction of a line connecting Harbin and Hunchun, but the Viceroy declined. Later the Russian authorities took it up with the Waiwupu and the latter sustained the Viceroy.

The report is made by the native press that a loan has been arranged with American capitalists for Tls. 18,000,000 and with British capitalists for Tls. 10,000,000, the funds to be used in the construction of the Kaifengfu-Changchow Railway.

THE KINCHOU-AIGUN RAILWAY.—In a letter to Messrs. Pauling & Co., Director Okamatsu of the South Manchuria Railway Company denies that Japan is opposed to the construction of this line and states that his country is anxious to participate in the financing and construction of the road with a share in the supply of materials. He writes that Japan would want the right to build a branch to connect the line with the South Manchuria. Mr. Wilfred Straight recently returned to New York via Europe to meet his principals in connection with this line. It is believed that his purpose is to interview Russian financiers with a view to securing their co-operation.

THE CANTON-HANKOW AND HANKOW SZECHUEN RAILWAY LOAN.—Advices from London on May 28th were to the effect that an agreement had been reached between the different nationals interested in this loan, and the impression was made that this meant the conclusion of the negotiations with the Chinese Government. The preliminary negotiations between the capitalists and the Chinese Government had been postponed for the reason that the German, French, British, and Americans could not agree. Now that they have agreed as to the division of the loan, the preliminary negotiations will be renewed and unless the provincial anti-loan influences seriously interfere, the conclusion of the loan may be arrived at within the year.

THE SHANGHAI-NANKING EXPRESS SERVICE.—This company inaugurated a fast service on its line on June 1st most successfully by an excursion to Soochow and return. A speed of 46 miles an hour was maintained on the outward trip and the return developed a speed of 60 miles, the maximum being 63 miles an hour at certain points. The track was in excellent condition. The locomotive used on this trip was a four wheeled coupled express engine manufactured by Messrs. Robert Stevenson & Co. of Darlington. The weight of the leading bogie wheels is 9.3 tons, trailing bogie wheels 9.65 tons, driving wheels 18.95 tons, trailing bogie 18.15 tons. Tender leading wheels 13.55 tons, intermediate wheels 13.55 tons, trailer wheels, 14.3 tons. Bogie empty 17.9 tons, engine 51.25 tons, tender 18.5 tons. Total weight of engine and tender empty 69.75 tons; bogie in working order 19.55 tons; engine in working order 56.65 tons; tender in working order 41.7 tons; engine and tender in working order 98.35 tons; tractive force at 75 per cent cut off 17.260 pounds; length wheel base of engine and tender 48 feet 9 inches; total length over the couplings 67.33-4; diameter of cylinders 18.26; diameter of driving wheels 6 feet 7 inches; diameter of bogie wheels 3 feet 6 inches; heating surface tubes 1,467.39 square feet. Fire box 162.61; Total heating surface 1,630 square feet; grate surface having an area of 28 square feet.

The first class coaches are of the most modern construction, electrically lighted and kept cool by a comprehensive system of fans. This express will have second and third class coaches, the former with a capacity of 72 passengers and the latter 130. The service was inaugurated June 3rd. Special arrangements were made for handling the special traffic to the Nanking Exposition. The following is the official notice published by Traffic Manager A. W. U. Pope:

"On and from the 3rd June, 1910, the present Time Table will be entirely revised.

"The Fast Train will leave Shanghai at 7:45 a.m. instead of 12:45 p.m. and the Slow Train at 8:10 a.m. instead of 8:00 a.m., the former stopping at the principal stations only, and the latter at all stations. No first class car will be attached to the Slow Train.

"There will also be an additional Limited Express Train leaving Shanghai at 1:05 p.m. and Nanking at 1:20 p.m. stopping at Soochow, Wusih, Changchow, and Chinkiang only. This train will hold only 48 1st class, 72 2nd class, and 450 3rd class passengers for the stopping stations, and when that number is accommodated the booking will stop. Seating will be provided on priority of application or booking. No pass holders will be admitted to this train, and no special cars will be attached for the public.

"A night train will run on Saturdays leaving Shanghai for Nanking at 10 p.m., returning from Nanking at 10 p.m., on Sunday.

"On Saturdays and Sundays, the ocal train which leaves Shanghai for Soochow at 6:10 p.m. and on Sundays and Mondays the local train which leaves Soochow for Shanghai at 7:30 a.m. will be cancelled.

"Important alterations will also be made in the running of other Main Line and Woosung Line Trains.

"New Time Tables may be had on application to any Station Master of any Station on the Railway, or from the General Offices, Shanghai Station on and from the 1st proximo."

PHILIPPINE MINING NEWS

QUICKSILVER IN BENGUET.—Warren D. Smith, Chief Division of Mines, announces the discovery by Mr. Hulbert of the Major Mining Company and Mr. Smith of a sample containing cinnabar, mercury sulphide, on Batwaan Creek, Benguet. It was found in the heavy concentrate while panning for gold. Only small quantities have been realized, but it is not improbable that it might be found in commercial quantities. The same material has been located near the Kios trail. The following information has been published in regard to this mineral by the Division:

"To assist prospectors who may not be familiar with the characters of cinnabar, the following information is furnished. It is a sulphide of mercury, Hg. S. and, when pure, contains 86.2% of mercury. It is very heavy its specific gravity being 8 to 8.2, it occurs in bright vermillion to brownish-red masses of granular texture; more rarely as small transparent rhombohedral crystals (its form in Benguet) or a bright scarlet powder, or an earthy red mass.

"Easy tests:—Heat the powder in a closed tube when a sublimate of mercury, or a 'mirror' will form in the cooler part of the tube, or if cinnabar powder is moistened with hydrochloric acid and rubbed on a bright copper, the coin will be coated with mercury

THE PARACALE EXTENSION COMPANY.--Messrs. M. A. Clarke and Nels Peterson, who are interested in the promotion of the Paracale Extension, are expected to return to Manila from Shanghai at the end of the month after which Mr. Peterson will proceed to New Zealand to purchase the first of two dredges to be installed during the next year on this property. It is understood that sufficient capital to instal the first dredge has been raised among Shanghai capitalists. The property is considered one of the most valuable in Paracale.

THE BENGUET CONSOLIDATED MINING COMPANY.—The output for the month of May was 100 ounces making in all to date about ₱20,000 worth of gold taken out since the disastrous flood of October. The company is preparing to restore the cyanide plant and increase the present capacity of the batteries.

THE STANLEY COMPANY.--The returns from the Stanley dredge in Paracale for May amounted to 108 ounces. Paracale is now in the middle of the dry season and water is scarce for dredging purposes. The Stanley is slowly approaching the richest sections of their property and large returns are expected.

Reconnaissance of Paracale.—Dr. Adams of the Division of Mines made a reconnaissance of the district last month. He also visited the new Nalisvetan and Guiniangan fields.

Surigao Placer Gold Fields.—A description of these fields appears in the *Philippine Free Press* and indicates that they give promise of large returns for investment.

"At present prospecting and development work is confined chiefly to the district around and to the north of Placer, about 25 kilometers south-east of the town of Surigao. A group of five or six Americans are testing the ground in that neighborhood and overtures have already been made by both New Zealand and American capital for an option on their claims.

"The ground in question is situated in and about the three creeks: Taganaan, Causuran, and Biga, only the first of which is shown on the map, the other two creeks lying just south of it. It is from the ground at the head of those creeks, which are described as tributaries of the Surigao river, that the rich nuggets kept as heirlooms in Spanish and Filipino families of Surigao were found. In his report Mr. Goodman, formerly of the division of mines, said some of these nuggets were as large as twenty dollar gold pieces.

"Besides the work being done near Placer reports have been received from time to time of some Americans working on the Agusan river, shown at the bottom of the map. During one of his trips south about a year ago Dr. Barrows, then director of education, said he found a lone American washing gold near the mouth of the Agusan and finding paying color in every pan. He had some natives working for him and said he was making a good living by even that primitive method."

The Masbate Field.—The work of development and investigation on the options held by the Philippine Exploration Company continues, and it is expected that the final report will be made several months before the options expire. The property is in splendid condition and values are practically available at the present time as a result of the large measure of well directed development work carried on by the owners during the last three years. Mr. Bridgeman, mining expert, representing the Shanghai capitalists interested, is in the Philippines looking after their interests in these options.

The Somosa Quartz Property in Paracale.—It is understood that New Zealand capitalists have secured an option on a number of quartz claims owned by Señor Somosa under an agreement to do a large share of development work and operate a quartz mill on a percentage basis. Several assays showing high values have been made, but up to the present time no definite average may be announced as the development of the property has not been sufficiently extensive to warrant a final report. The indications are that they offer a good prospect and warrant the expenditure of sufficient money for uncovering the hidden wealth.

Hydraulic Mining in Nueva Ecija.—A number of mining men interested in placer on the Pecco River are considering the advisability of installing a plant to develop some claims that show on reconnaissance rich deposits. The investigation of the property has not up to this time warranted the expenditure of large capital. The placer properties in this section have shown values from 60 centavos to ₱1 a cubic yard where the testing has been thorough, but very little work has been done on the Pecco section.

General Resume.—There are many reports of rich deposits being received in Manila from different parts of the islands, and judging from results where development has been carried out under competent supervision, many of these prospects will prove far from disappointing. However, few properties in the islands may claim to the title other than "prospect" and a prospect remains until the values and volume of paying deposits are known. This can only be secured by well directed effort and careful expenditure of money.

Many discouraging results have followed the early installation of mills in mining districts before sufficient ore was made available to keep it engaged or the property had been uncovered to the extent necessary to measure the volume and values and to make the proper selection of a site for the plant. It may be said that the Philippine mineral districts have now passed that juvenile stage where dreams are liable to cause heartaches in their passing. The development of prospects is now being carried on without any dream attachments and as might be expected with much more satisfactory results and fewer disappointments.

FAR EASTERN ENGINEERING, CONSTRUCTION, FINANCIAL AND COMMERCIAL NEWS

ELECTRIC RAILWAYS, LIGHT, POWER, TELEGRAPHS, TELEPHONES, AIRSHIPS, ETC.

Underground Wires in Tokyo.—Official permission is extended to the Tokyo Electric Railway to supply lighting throughout the city by means of underground wires. It is estimated by the company that while the initial expense will be heavy, the annual maintenance will be greatly reduced. It is expected that there will be keen competition between the railway and the electric light company with a corresponding reduction in cost of service.

Wireless on Pratas Island.—The Viceroy of Canton has announced that it is his purpose to install a plant on this island at an expenditure of $100,000.

Electric Franchise for Zamboanga.—The Zamboanga Water Electric & Power Company has made an application for a franchise to the Philippine Legislature. The matter is being favorably considered.

Philippine Wireless Committee Appointed.—The following members were appointed by Executive Order of President Taft: Commissioner Elliott, Secretary of Commerce and Police, Colonel P. Scriven, U. S. Army, and Commander C. M. Knepper, U. S. Navy. They are to consider the substitution of a complete wireless service throughout the archipelago for the present cable service.

In this connection it might be said that it has been decided to instal wireless plants on Mount Mirador, Benguet, and Santo Domingo de Basco, Batanes, for meteorological purposes under the direction of the Philippine Weather Bureau.

Singapore Electric Tramways.—At the last annual meeting the chairman in his review of the year's operations expressed optimistic views of the company's future based on the result for 1909. He stated that the system had been benefited by the opening of the Singapore Bridge.

The Singapore receipts for the year under consideration were £64,234 4s. 2d., as against £60,020 7s. 7d. for 1908, showing an increase in the gross receipts of £4,213 16s. 7d. The ration of working expenses to those of receipts fell from 59.76 per cent. in 1908, to 52.63 per cent. in 1909, and the expenses per car mile fell from 3.99d. to 3.56d. The total running expenses were £613 less than in 1908, with an increased car mileage of 193,354 miles. The system carried in 1909 13,806 more passengers than in the previous year, but the passengers carried per car mile dropped from 6.54 to 5.96. The passengers per car mile show an increase, although the 1908 figure of 6.54 has not yet been reached. For the last three months the average number of passengers per car mile was 6.27, as against 6.17 for the first sixteen weeks in this year.

Shanghai Telephone Exchange.—The installation of the exchange in the new concrete building was completed last month. The testing apparatus, dynamos, accumulators, etc., are installed on the lower floor and the offices, switch boards and operators on the upper floor.

The power plant consists of a duplicate set of motors and dynamos for supply current for the telephones and lamp signals and also for ringing the subscribers' bells. Also a set of eleven accumulators, each with a capacity of 2160 amp hours at present, but which can be increased to 4000 amp hours by the addition of extra plates. The switchboard as completed consists of 17 sections equipped for 5600 subscribers' lines but with an ultimate capacity in the frame works for 10,000 lines. The total staff required to control and operate it including foreigners and Chinese is 130, the originating calls averaging some 35,000 per day. A special feature in this Exchange has been the adoption of enamel insulation on all wires used on the work for the purpose of securing freedom from cross talk owing to contacts from low insulation during the damp season and, although it has never been used for this purpose before in any Telephone Exchange either in Europe or in the United States, the results so far seem to justify the slight increase in cost. The length of wire used in the construction of the Exchange amounts to some 1,400 miles and the number of soldered joints and points of contact all of which must be electrically and mechanically perfect, amount to some 900,000. The contract was carried out by Messrs. Scott, Harding & Co., for their principals, the British Insulated and Helsby Cables, Ltd., whose works are at Prescott, Helsby and Liverpool. The first shipment was received September last. Mr. F. R. Baldock was in charge of the installation.

Pacific Mail Wireless.—This company has directed the installation of wireless plants on the China, Siberia, Mongolia, Asia and Manchuria.

Chinese Naval Telegraph Installations.—Prince Tsai Hsun, Commissioner of the Navy, has directed that telegraph lines be installed between Ninghai and Sihuwan. The latter port will be the Chekiang naval station for the fleet.

Tokyo Electric Light Expansion.—This company proposes to utilize its increase of yen 32,000,000 in capital for the carrying out of its second system of hydro-generation of electric current. This means the harnessing of the Katsura River from Tonegama to Hashijiri, a concession having been secured in combination with the Tokyo Electric Power Company. The water has a fall of 375 feet and will develop a power of 35,000 kilowatts.

Osaka Electric Enterprise.—There are four systems of electric lines in this district, none of which have made a very encouraging showing. The Kobe system cost yen 750,000 a mile and pays a dividend of 5%; the Hyogo cost yen 330,000 per mile and pays less than one percent; the Keihan cost yen 280,000 a mile and pays from 4 to 5% and the Kimen which cost yen 190,000 a mile pays 6%.

Tientsin Aviator Company.—A company has been promoted by Messrs. Galluser, Bochin, Bruschweiler, Chevallaz and Runacher of Tientsin forthe purpose of introducing the Bleriot monoplane in China. The first machine is expected by the end of the month from Paris.

Eastern Telegraph Company.—The report of the directors for the year ended December 31st, 1909, recommends after the usual contribution is made to the general reserve, the payments of interest, of dividend of 3.5% preference stock and three interim dividends of

£1 5s. per cent each on ordinary stock to September 30, 1909, that the balance be made available for the payment of a final dividend of £1 5s. per cent. and a bonus of £2 per cent. making a total of 7% on the ordinary stock for the year.

THE EASTERN EXTENSION AUSTRALIA AND CHINA TELEGRAPH COMPANY.—The directors of the Eastern Extension Australiasa and China Telegraph Company, in their report for the half year ended Dec. 31 last, state that the gross receipts amounted to £315,034, against £306,889 for the corresponding half-year of 1908. The working expenses, including £17,997 for maintenance of cables, totalled £143,674, against £151,507 for the corresponding period of 1908, leaving a balance of £171,360. From this is deducted £3,841 for income-tax payable in England, and £15,048 for interest on debenture stock, leaving, as the net profit for the half-year, £152,471. After adding $59,844 brought forward from the previous half-year, there is an available balance of £211,315. One quarterly interim dividend of 1¼ per cent. has been paid for the half-year, and it is now proposed to distribute another of like amount on May 11, making, with the interim dividends paid or the first half-year, a total dividend of 5 per cent. It is also proposed to pay a bonus of 4s. per share, or 2 per cent., making a total distribution of 7 per cent. for the year 1909. The sum of £50,000 has been transferred to the general reserve fund, and the balance of £26,315 carried forward.

PUBLIC WORKS, DOCKS, WHARVES, BUILDINGS, ETC.

HANGYANG IRON WORKS' WHARVES AT SHANGHAI.—This company has been selecting a site and advertised for proposals to construct wharves for the handling of pig iron for exshipment.

SANITARIUM AT SIBUL SPRINGS.—The Philippine Government has appropriated the sum of ₱50,000 in addition to a former appropriation of ₱50,000 for the purpose of constructing the necessary buildings and making such improvements as are necessary to the establishment of a modern sanitarium. A resident physician will be appointed. The improvements will include the opening and construction of streets, the straightening out of the esteros, the construction of the central park and a pavilion at the entrance to the bathing establishment.

HARBOR FOR TOKYO.—With the proposal to construct a canal between Yokohama and Tokyo comes the more sanguine suggestion from the Tokyo Yomiuri urging the city of Tokyo to undertake the construction of a large harbor for Tokyo irrespective of the probability of the canal project being carried out. That journal suggests that with the opening of the Panama canal the increased trade would warrant the outlay which it estimates would be approximately yen 38,700,000.

TO REBUILD ZOJOJI TEMPLE.—This landmark in Shiba Park, Tokyo, which was recently burned, will be reconstructed at an outlay of yen 1,000,000.

THE EMPRESS DOWAGER'S PALACE.—The Empress Dowager recently commanded that a palace costing Tls. 6,000,000 be built for her use, but Duke Tsai Tse has advised against the expenditure for economic reasons.

CHEFOO HARBOR IMPROVEMENTS.—The plan adopted by the Chinese and foreign residents of Chefoo for the improvement of the harbor is now being considered at Peking. The main feature of the scheme is the construction of a sea-wall at an estimated cost of Tls. 1,500,000 to be repaid by wharfage dues and a five per cent. duty on domestic and foreign imports and exports.

THE TOKYO SEWAGE SYSTEM.—The scheme authorized recently by the city council will cost yen 33,660,000, half of which will be conributed by the Imperial Government. Of this amount yen 5,800,000 will be spent during the first five years beginning 1911 for the extension in the Asakusa, Shitaya and Kanda districts. The loan will be redeemed by a tax for street improvement and a sewage tax.

OPENING OF PORT ARTHUR HARBOR.—With the opening of Port Arthur to foreign trade it is stated that only the western portion will be made available. It is proposed to cut a waterway across the Tiger's Tail and to dredge an area of 300 acres to a depth of from 24 to 30 feet. Besides this, commodious wharves are to be built with railway connections. The eastern part of the harbor will not be opened for commercial purposes. The cost of these improvements is estimated at about yen 50,000,000 and will be borne by the Government and the South Manchuria Railway. The work will extend over a period of seven years.

THE TONGKU DOCKYARDS.—The Viceroy of Chihli recently inspected the newly completed Government Dockyards and reported favorably on the plants.

THE PEKING UNIVERSITY.—The Government has decided to expend Tls. 2,000,000 instead of Tls. 4,000,000 as was first reported in the construction of this important university and of this sum Tls. 500,000 will be made available annually. A Japanese engineer has been engaged.

FRENCH INDO-CHINA PUBLIC WORKS.—The proposal has been made by the *Temps* that the military contribution of francs 10,000,000 from the colony should be cut down one third and thus enable the colony to float a loan of francs 100,000,000, out of which Francs 45,000,000 could be utilized for irrigation works and the balance for the construction of branch lines of railways to afford better means of communication for isolated districts in the interior.

CEBU WATER SUPPLY.—The Philippine Legislature has authorized the issue by the Cebu municipality of ₱250,000 of public works bonds to assist in the installation of a gravity water supply to cost ₱500,000 when completed. The insular Government will lend ₱150,000 and the Cebu Municipality and the Province of Cebu will furnish ₱50,000 each to make up the deficiency. The water will be secured in a gorge about six miles from the city that forms a natural reservoir. The capacity of the proposed reservoir will be 400,000,000 gallons and the annual consumption of city and army post is estimated to be 700,000,000 annually. The minimum annual revenue is estimated at ₱75,000. The recent loss of over ₱8,000,000 by fire due to lack of water for fire protection was largely responsible for the agitation that resulted in having the scheme approved.

THE AGUS RIVER BRIDGE.—The construction of a 104 foot Pratt truss span bridge mounted on concrete abutments over the Agus River between Marahui and Dansalan, Moro Province, is under way. The river has a swift current with rock bottom so that the truss has to be floated into position on account of the impossibility of driving piles for false work.

CHINCHOU HARBOR SCHEME.—It is reported from Peking that the government favors the construction of a harbor at Chinchou at a cost of Tls. 7,000,000 and to accept an offer made by American capitalists to furnish the required funds. This port will be the terminus of the proposed Chinchou-Aigun line and will be the only Chinese ice free port serving as an outlet for Manchuria.

THE HUANGPU CONSERVANCY.—There is some discussion over the future of the conservancy works as to whether the original plans will be carried out or that the maintenance of Astraea Channel be considered sufficient to meet the requirements of the shipping community. It would appear that Conservancy Board has indicated that it deems all but the provision for maintenance to have been completed by the recent notice given M. de Rijke of the termination of his contract on November 30 of this year. The board announced that this action was necessary on account of shortage of funds. A protest has been filed by the Shanghai Branch of the China Association against the abandonment of the scheme in any part.

Commenting on the situation, the *N. C. Daily News*, says;

"The position is complicated owing to the omission to determine whether the sum, originally agreed upon by the Chinese and Foreign Governments, of Tls. 9,320,000, spread over twenty years, was sufficient for the purpose that it was intended to serve. If the Conservancy Board finds that there is little chance of its receiving the money necessary to complete M. de Rijke's whole scheme and that the community must be satisfied with the opening and maintenance of the Astraea Channel, then it is well advised to reduce its expenditure as soon as possible to the minimum point compatible with the adequate supervision of Astraea Channel. Clearly this is not the work for M. de Rijke to undertake, as it can be done by a junior engineer, and the Board would not insult him by asking him to stay for such a purpose. But if some arrangement can be arrived at by which provision is to be made for the completion of the whole conservancy scheme—including the Normal Lines, the rounding-off of Pheasant and Pootung Points—it will always be possible, we hope, to retain M. de Rijke's services for the community.

SHIPBUILDING, GENERAL MARINE AND FISHERIES

BIG JAPANESE DREDGER.—The Japanese Government has placed an order with the Uraga Dock Company for the construction of a dredge of 1,200 tons displacement, to be used in the Shimonoseki Straits, at a cost of yen 340,000. It will have a capacity of 800 tons an hour and work to a depth of 40 feet.

THE NIPPON YUSEN KAISHA.—The net profit for the half year ended March 31st amounted to yen 1,703,500 after deducting yen 935,025 for depreciation, yen 462,017 for insurance and yen 603,853 for the structural repair fund. Including the balance from former term there were yen 2,103,206 available for distribution, out of which the directors proposed that yen 85,124 be added to the Reserve Fund, raising it to Yen 2,868,456; and that Yen 59,465 be allowed as Directors' and Auditors' fees. From the remainder the Directors recommend a Dividend at the rate of Ten per cent. per annum, which will absorb Yen 1,100,000.

The balance, Yen 858,616, will be carried forward to the next account.

BIG SHIPPING COMBINE.—The Royal Mail Steam Packet Company has purchased the whole of the share capital of the Pacific Steam Navigation Company and have thus secured control of an additional fleet of 44 vessels aggregating a tonnage of 182,930 tons approximately. The fleet of the Royal Mail Packet line comprised 48 steamers with a tonnage of 205,500 approximately.

SNAGGING CRAFT FOR PERAK WATERS.—The *Pinang Gazette* announces the launching of a vessel from the Eastern Engineering Company's works at Weld Quay, which is to be used in removing snags from the rivers of Perak. She is 40 feet long, 15 foot beam and 5 ft. 9 in. deep. It is fitted with heavy derricks, shear legs, winches, etc., with a capacity to raise 20 tons.

P. & O. DIVIDEND.—The directors of this company announce a dividend of 5% on preferred and 7% per cent interim on deferred for the half year ended March 31st, 1910.

KOREA'S FISHING INDUSTRY.—The Asahi Shimbun states that there are 3,898 Japanese fishing boats operating in Korean waters manned by 16,644 fishermen and the output of fish amounts to a gross value of yen 3,760,000, while the Koreans have 12,411 boats manned by 68,520 men with a total catch to the value of 3,139,000.

New Type of Turbine.—Chief Engineer Kubota of the *Chejoo Maru* has designed a new type of turbine engine which is reported to have been tried out successfully on his vessel. A launch of the South Manchuria Railway is being equipped with this Japanese invention. Mr. Kubota has been working on this improvement for the last four years.

Russian Steamers Race.—"A race between the Russian East Asiatic Co.'s S. S. *Sishan* and Russian Volunteer Fleet S. S. *Kostroma* has just taken place to secure the first shipment of Congou Tea for the Siberian Railway," says the *Hankow Hews.* "Both vessels left Vladivostock on the 26th May, the Volunteer steamer at 4 p. m. and East Asiatic vessel at 5, arriving in Hankow on 3rd inst., the S. S. *Sishan* at 2 a. m., 7½ hours ahead of the competing vessel."

The Siam Steam Packet Company.—This company has increased its capital stock from Ticals 150,000 to Ticals 240,000.

Hongkong Shipping.—"Last year 527,280 vessels of 34,380,845 tons entered and cleared at Hongkong" says the *Hongkong, Post.* "Although a decrease on the previous year of 4,832 vessels, the tonnage shows an increase of 215,604 tons. Of this total 43,794 vessels of 22,415,125 tons were engaged in foreign trade, the percentage of British ocean-going vessels being 9.3 in number and 34.5 in tonnage, as against 9.8 and 35.1 respectively for foreign ocean-goers. The figures are truly amazing, and show the magnitude of Hongkong's importance as a world port. In the past twenty years the average tonnage of ocean vessels visiting Hongkong has risen from 1,182 tons to 2,390 tons, in other words the average has doubled itself. The loss of the Powan and Yingking, the withdrawal of the Hoi Sang and Kwang Fat and the laying up for a period of the Tak Hing, adversely affected the river traffic to the extent of 585,728 tons."

The Salvage Steamer Protector.—This vessel which recently stood by to assist in the refloating of the American Drydock Dewey gave an exhibition in Manila Bay last month. The vessel is owned by the M. Z. Svitzers Salvage Enterprise of Copenhagen and was built in 1905. She is of 542 tons gross and equipped with triple expansion engines of 1150 h. p. with a speed of 13 knots. Her powerful centrifugal pumps have a capacity of 6,000 tons of water an hour. Besides this she is equipped with the most modern and powerful salvage gear designed for work in the tropics.

Rapid Transit of Silk.—The Steamship *Minnesota* sailed from Yokohama on the afternoon of May 22nd and arrived in Seattle on the morning of June 3rd, making the voyage in 11 days and 14 hours. This is the record for sailing. The s. s. *Tambo Maru* of the Nippon Yusen Kaisha delivered a similar cargo at Seattle in 15 days and 6 hours and it was carried by rail over the Great Northern Railway connections to New York in 4 days, 18 hours and 15 minutes from Seattle. This is the record by rail.

New Japanese Destroyer.—The keel of the destroyer Yamakatze was laid at the Mitsu Bishi Dockyards & Engineering Works last month. This vessel is to have a displacement of 1,150 tons, a speed of 33 knots, and 21,000 horse power. In every point she is second to none but the *Swift* of Great Britain which holds the first rank among the destroyers of the world. She is to adopt the turbine system and to be fitted with 2 three-inch guns and 2 torpedo tubes.

The *Yamakaze* is to be built according to practical lessons gained in actual warfare. She will be launched at the end of this year or early next year and will be placed in commission in May next year. When she is ready for sea, she will form a flotilla with the *Sazanami, Kagero* and six others.

MINES, MINERALS AND THE METAL TRADE, MACHINERY, ETC.

F. M. S. Tin Returns.—The total output for April aggregated 11,262 piculs for the month of April. The total exports for the first four months of this year amounted to 239,189.43 piculs a falling off of 6,999 piculs compared with the corresponding term last year. The values, however, show an increase for the same period of $1,740,344 compared with 1909, and the increase in duty is represented by $249,893.

Large American Order for Eastern Petrol.—The *Free Press* of Singapore announces that the Shell Transport and Trading Company has booked an order for 10,000,000 gallons of petrol from the United States and at a 25% advance on the ruling prices in Great Britain. The demand for gasoline for motoring in the United States is believed to have created a shortage in the market.

The Pensihu Colliery.—The organization of this company by Japanese and Chinese capitalists is reported effected. The capital is $2,000,000 Peiyang silver, of which each nationality will subscribe an equal share. The sum of $350,000 will be disbursed at once and the balance paid in instalments. It is reported that the Viceroy of Manchuria has purchased the interests of the Okura company in the colliery by means of a loan from the Yokohama Specie Bank for Tls. 150,000. The Chinese Government is to receive a royalty of 25% of the net profits.

The British Borneo and Burma Petroleum Syndicate, Ltd.—This company, which was recently organized as the result of the increase in capital of the British-Borneo Petroleum Syndicate Ltd. to £100,000 and a vote to change the name of the latter at the recent extraordinary meeting of the shareholders of London, is perhaps the most promising of oil ventures in the East. It controls 440 square miles of territory in British North Borneo, of which 160 miles are oil bearing. In Burma the company controls 10 blocks of one square mile each with the right to take six more blocks, all in the oil bearing district where the Burma Oil Company is operating. The British North Borneo Oil lands are situated six miles from Labuan where a coaling station is located and where an oil storage will be installed. Extensive boring operations are under way and the samples taken from this area show 30 per cent. petrol, 36% of high grade illuminating oil, 17% of spindle oil and 15% of extremely flash-point oil suitable for the manufacture of superior lubricants. The company expects to supply oil burners in Far Eastern waters with its second grade product. The lease of these lands run for 999 years and under the most favorable conditions.

Raub Gold Mine.—The returns for the four weeks ended May 21st amounted to 1,150 from the Bukit Koman and 95 ounces from the Bukit Malacca.

Japanese Coal to Alaska.—The Alaskan Northern Railway have announced that it has purchased 500 tons of Japanese coal for use as fuel during the summer months.

The Rawang Coal Prospect.—The following notice appears in the form of an advertisement in the Government *Gazette*:

"It is hereby notified that, a seam of coal having been discovered near the 26th mile on the Rawang and Kuala Selangor Road, the Government is prepared to consider applications from individuals or syndicates for exploiting and working the same. The area available for alienation lies within a radius of 3 miles from the existing bore."

Railway Steel for the Chinese Section, Hongkong-Canton.—Several cargoes of steel rails from the Hangyang Iron Works have been discharged at the railway wharf at Blackhead's Point to be transported from the Kowloon end to the point of construction. One cargo included 1,000 tons of steel.

Shangtung Gold Mines.—The Governor of Shangtung has petitioned the Peking government to take steps to develop the deposits of gold in the mountains of Lang and Hsien. A survey has been ordered. Sometime ago the British Minister asked that these mountains be included in the jurisdiction of Wei-Hai-Wei, but this concession was not made. Recently many foreigners have asked for concessions in that region.

Yunnan Tin Mines.—A project is on foot to develop the old tin mines of Koju in this province. It is reported that a company with a capital of Tls. 2,000,000 has been organized by Chinese for this purpose. Modern machinery is to be installed with a capacity of 40 tons daily. By the old methods only 6,000 piculs of tin were saved annually.

The Oriental Consolidated Mining Company.—This company which controls the largest and most successful gold mining enterprise in Korea is capitalized at $5,000,000 and the output from its different properties aggregate approximately $1,500,000 gold annually. The two principal mines are the Taracol and the Tabowie. These concessions are about three days' journey from Seoul in the province of Unsan. Besides these properties there are many groups of rich prospects in the process of development. The company has paid over 10% annually for years and with the extension of the plant the prospect for increased profits is very bright.

Duff Development Company.—The output from the three dredgers operated by this company for the first quarter this year amounted to 1,380 ounces compared with 3,600 ounces during the corresponding period, 1909.

The Hoden Oil Gushers.—The reports from this company's oil wells are to the effect that the output of three of them increased recently from 8,000 gallons to 28,000 gallons without warning and a corresponding increase in output has been noted in less active wells.

COMMERCIAL, FINANCIAL AND MISCELLANEOUS

Chinese Support for Parliament.—The announcement is made that Chinese, resident in foreign countries, have expressed their willingness to subscribe the sum of Tls. 80,000,000 as a contribution to the Chinese Government upon the opening of the Imperial parliament.

The Nanyang Exhibition.—The most favorable reports have been received upon the extent and comprehensiveness of this exposition which was opened June 5th. The railway facilities from Shanghai aided greatly in making it a success and the exhibits were representative of the many countries participating.

Philippine Bureau Transfer.—The Bureau of Agriculture has been transferred to the Department of Education.

Typewriting on Bills of Exchange.—A circular has been issued by the Exchange Bankers Association calling attention to the risk involved in typewriting particulars in bills of exchange instead of using pen and ink. The difficulty of detecting alterations involves a serious risk and the Association desires co-operation in reducing this risk by abandoning the use of the typewriter in this particular.

Tea Advertising Subsidy.—The Inspector General of the Chinese Imperial Customs by his personal representations has secured the continuation of the annual subsidy of Tls. 12,000 from the Peking Government for the China Tea Association.

American Businessmen's Itinerary.—The party of American businessmen who propose visiting China in September will consist of forty-five representatives of nine chambers of commerce of the Pacific States and will land first at Shanghai and proceed to Nankin, Hankow, Peking, Tientsin, Newchang, Mukden and Port Arthur, whence they will go to Foochow, Amoy, Canton and Hongkong. Six weeks will be spent in China.

Naval Ice Plant at Olongapo.—The Navy Department has decided to establish an ice plant at Olongapo Naval Station to be four times the capacity of the present plant, operated by the Marine Corps.

New Philippine Sawmill.—The Cadwallader Gibson Lumber Co. has completed the installation of a sawmill on their concession at Limay, Bataan, with a capacity of 90,000 feet daily. This makes two mills operating under the direction of this company which will have an aggregate capacity of 150,000 feet.

Negros Sugar Short.—The report from Negros places the 1910 crop at 90,000 piculs as against 106,050 for 1909.

Copra Sterolizing Experiments.—Consul General Du Bois of Singapore states that experiments are being made by French experts in the preservation of copra in transit from the development of rancidity. Sterolizing with a sulphur preparation has been found very satisfactory and is reported to preserve the copra from mould for several years.

Yokohama Specie Bank as Government Monetary Organ.—The details of the provisions of the charter granting the bank powers in Manchuria are given by the *Japan Times* as follows:

(1) "The Yokohama Specie Bank is instructed to act as a money organ in Manchuria instead of establishing a special money organ, so that the Bank should take measures to give facilities for the trade between Japan and China and various other monetary facilities. (2) The Bank should increase the limits of loans issued on immovables on portage and make investments in such business undertakings for the development of Manchuria as are thought promising, at possible lowest rate of interest. (3) The rate of discount and the remittance commission should be made as low as possible. (4) A special investigation organ should be established for fixed investments. (5) Branches or sub-branches should be established in Manchuria when such establishment is thought necessary by the Government. The capital for fixed investment is said to be fixed at about 3,000,000 yen.

China's Monetary Reforms.—*The Shenpao* states that the Board of Finance has issued regulations reorganizing the currency of the empire. Among them it is provided that the Yuan will be the basis of Chinese money (silver). The word is the equivalent of the Japanese yen. It will have a weight of seven mace and two candarin or about the weight of the yen in silver. The yuan will be of 90 per cent. fineness while the fifty and twenty-five cent pieces will be of 80 per cent. and the ten cent pieces 65 per cent. fineness. The subsidiary coins will be known as five chueh (fifty cents), two chueh five feng (twenty-five cents), one chueh (ten cents) in silver, and five feng (five cents) in nickel, two feng (two cents), one feng (one cent), five li (five cash) and one li (one cash) in copper. The Yuan, chueh, feng and li are in the decimal system respectively and the rate is fixed and is not allowed to be voluntarily lowered or raised.

The Kedah Estimates.—The revenue estimates for the year amount to $1,490,478 as against $1,240,276 actual last year and the expenditure estimates $1,568,607, including revokes, as against $1,005,328 actual last year. The following is the distribution of expenditure under the different heads:

State Council, $62,019; Police, $118,604; Land, $45,225; Survey, $35,650; Prisons, $32,674; Medical, $30,964; Posts and Telegraphs, $21,854; Education, $20,306; Chandu Monopoly, $245,144; State Pensions, $22,960; Allowances to members of the Ruling House, $54,890; Interest on loan, $108,838; Miscellaneous, $179,000; Public Works, $384,430.

Hall & Holtz Increase Capital.—At a recent extraordinary meeting of the shareholders the capital of this company was increased to $560,000 Mex. by the creation of 7,000 additional shares at $20 mex. each.

Increase in Philippine Exports.—A comparison of exports to the islands from the United States between the first eight months of the fiscal year 1909 and the same period in the fiscal year 1910 show an increase of $4,500,000 in the latter year.

The Manila Commercial Company.—This company has purchased the plant, assts and good will of Messrs. Baer Senior & Co.s Successors, including the La Yebana Cigar & Cigarrette Factory as a going concern. The company has been incorporated under the laws of the Philippine Islands and will continue business as taken over with increased capital and facilities and with the same management as heretofore. Mr. A Determan is President and General Manager and Mr. P. Meller, Vice-President and Assistant General Manager.

Russian Tourists to Visit Japan.—A party of fifty professors and students from Tomsk, Siberia, will pay a visit to Japan in August.

Ta Ching Bank in Talien.—The ministry of Finance has decided to open a branch of the Ta-Ching Bank at Talienwan.

Japanese Ministry for the Colonies.—It is reported from Tokyo that the Government proposed to establish a department to oversee the affairs of Korea, Formosa and Saghalien.

Emigration to Heilungkiang.—Arrangements are being made for the transportation and encouragement of 5,000 natives of the province of Hupeh to settle in the province of Heilungkiang.

Opening Yenchi to Foreign Trade.—It is proposed to appropriate the sum of Tls. 400,000 out of the customs receipts of the port of Canton to defray the expenses of opening the port of Yenchi, situated 200 miles south-east of Kirin, to trade.

Struck off Hongkong Registry.—The Gazette has announced the following companies struck off:

The Shanghai Carrying Company, Ltd; The Hongkong Coal and Minerals Company, Ltd.; The Tung Sang Yu Newchwang Bean Oil Manufacturing Company, Ltd.; The Man Ying Land Investment and Agency Company, Ltd.; The Chungking Trading Company, Ltd.; Tours of the World (Eastern), Ltd.; The Hoi Sun Printing and Publishing Company, Ltd.; The Sing On Steamship Company, Ltd.; Cottam & Company, Ltd.; The Hongkong and South China Trading Company, Ltd.; The Heng Fung Flour Mill Company, Ltd.; The China Fishing Company, Ltd.; The Kwong Shun Steam Boat Company, Ltd.; The Oriental Union Fire Insurance Company, Ltd.; The Hill Remedy Company, Ltd.

Pacific Tank Company Expands.—The business and manufacturing plants of the National Wood Pipe Company and Pacific Tank Company have been consolidated. In future all business of the National Wood Pipe Company and Pacific Tank Company will be conducted under the name and style of Pacific Tank & Pipe Company. The officers and employees of both Companies have been retained and all contracts and other obligations of every nature are assumed by the Pacific Tank & Pipe Company.

The consolidation has been brought about by the increasing demands for the products of both companies, with a view of concentrating our efforts and specializing on water, oil, wine and mining tanks, machine banded and continuous stave water pipe, and irrigation supplies.

The company has just completed the largest pipe and tank factory in the world at Portland, Oregon, and with their other factories at San Francisco and Los Angeles being enlarged to increase the productive capacity of all departments, enables them to execute orders with dispatch.

CATALOGUES RECEIVED

Style Book No. 24 of Murray Vehicles, Harness and Saddles. Messrs. Wilber H. Murray Mfg. Co., Cincinnati; Ohio. John R. Edgar & Co., Manila, Book and Stationery. General Catalog, Books, Office Supplies.

The Ferro Monthly by the Ferro Machine & Foundry Company, Cleveland, Ohio. Published in the interest of those who sell and those who use the Ferro motors.

The Lodge & Shipley Machine Tool Company, Cincinnati, Ohio, Engine and Turret Lathes, Catalogue No. 21.

REVIEWS

Hydraulic Mining, with Supplements on Roads and Motor Traction for Mining by C. C. Longridge, M. Inst. Mech. E. The Mining Journal, Price 20*s.* net.

This is the most comprehensive work on practical mining that has been issued for many years and will be found of great interest in every department of the mining industry from the prospector to the director of a mining company. It includes exhaustive information on the classification, test and valuation of alluvials with descriptions of different methods of applying water power and of working alluvial deposits under almost every known condition. The work is appropriately illustrated with drawings and photographs.

The Recognition of Minerals, by C. G. Moor, M.A., F.I.C. The Mining Journal, London, Price 7-6 net.

This work is a collection of notes and simple tests for the use of travellers and prospectors gathered in a long experience in the study of minerals. The author was formerly resident chemist to the Ashanta Goldfields Corporation, late public analyst of the City of Exeter, public analyst to the County of Dorset and the borough of Poole. The work is very exhaustive and contains monographs on geology, Ore Deposits, Etc., by Donald A. MacAllister, Assoc. R. M. S., F.G.S.

Cost Accounting Pathfinder, by Frank E. Goodwin, Associate Editor *Farm and Machinery*. Midland Publishing Company, St. Louis, Mo.

This little book is designed to impress upon the merchant the importance of maintaining a record of the exact cost of conducting his affairs of trade, and the substitution of old methods of guess work for modern ways of arriving at the actual cost. It is comprehensive and should be in the library of every progressive business man.

Ornamental Concrete Without Molds, by A. A. Houghton, a wellknown authority on concrete construction. The Norman W. Henley Publishing Company, New York. Price. $2.00 gold.

This is announced as a practical treatise explanatory of a system of molding ornamental concrete units with templates and contains additional information on the proper proportion of concrete for ornamental work, the proportionate size of the various units and the reinforcement of work. It contains everything that a concrete worker needs to know to perfect the many styles of ornamental concrete work without the purchase of expensive molds. An interesting collection of drawings illustrative of the subject is included.

FOR SALE

500 H. P. WHEELER CONDENSOR.—One Wheeler Condenser, similar to illustration of C. H. Wheeler Condenser & Pump Company's Catalogue No. 7, Page 7. To condense steam from battery of boilers of 500 h. p. capacity. Second hand,—but in excellent condition, complete with pumps, etc.

No reasonable offer refused.

B. A. Green,
General Broker, Manila, P. I.
Cable Address: Bag.

FAR EASTERN STOCKS AND QUOTATIONS

Courtesy of Messrs. Kadoorie & Co., Hongkong, June 10, 1909.

STOCK.	WHEN ESTABLISHED	CAPITAL	NO. OF SHARES	VALUE	PAID UP	RESERVE	AT WORKING ACCOUNT	DATE	LAST DIVIDEND.	Approximate Yield per cent per annum at Present Quotation	CLOSING QUOTATION
BANKS.											
Hongkong & Shanghai Banking Corporation	1865	$15,000,000	120,000	$125	$125	g £1,500,000 s $15,500,000 i $250,000	$2,028,988	31-12-09	£2. 5/- for half year ending 31-12-09, @ ex 1/9½=$25.11	4	940 sales £90
National Bank of China, Ld.	1891	£699,475	10) 99,925	£7	£6	c £4,099 $400,000	$34,167	31-12-09	$2 (London 3/6) for 1903	....	$76 buyers
MARINE INSURANCES.											
Canton Insurance Office Ld.	1881	$2,500,000	10,000	$250	$50	$1,560,000 j $254,583 u $302,799	Nil.	31-12-08	$10 for 1908	7	$177½
North China Insurance Co., Ld.	1903	£150,000	10,000	£15	£5	g £125,000 s Tls. 225,000 u Tls. 335,253 f Tls. 146,586	Tls. 207,572	30-6-09	Final of 7/6 making 15/- for 1908.	....	Tls. 110 sellers
Union Ins. Society of Canton, Ld.	1867	$3,100,000	12,400	$250	$100	s $3,000,000 g £90,000 f $287,984 j £1,449,735 u $713,985	$287,984	31-12-09	Final of $20 per share, making in all $50 per share for 1908, and an int. div. of $30 per share for 1909	5½	$825 sal. & se
Yangtsze Ins. Association, Ld.	1889	$1,200,000	12,000	$100	$60	$1,000,000 j $294,405 $199,234	$707,637	31-12-08	$12 and bonus $3 for 1907	7	$230
FIRE INSURANCES.											
China Fire Ins. Co., Ld.	1870	$2,000,000	20,000	$100	$20	$1,000,000 z $550,348 f $61,168	$438,406	31-12-09	$6 and bonus $2 for 1908	7½	$114 buyers
Hongkong Fire Ins. Co., Ld.	1868	$2,000,000	8,000	$250	$50	$1,460,000	$426,218	31-12-09	$27 for 1908	8%	$347 buyers
SHIPPING.											
China & Manila Steamship Co., Ld.	1882	$750,000	1) 30,000	$25	$25	i $57,734	Dr $3,777	31-12-09	$4% for 1906	....	$7½ sellers
Douglas Steamship Co., Ld.	1883	$1,000,000	20,000	$50	$50	$230,000 i $100,589	Nil.	30-6-09	$2½ for year ending 30-6-1908	....	$33 sellers
Hongkong, Canton & Macao Steamboat Co., Ld.	1865	$1,200,000	80,000	$15	$15	e $250,000 d. i. $627,500 f $103,545 $ 19,106	$20,766	31-12-09	Final of $1¼ for 1909	7¾	$29¼ sellers
Indo-China Steam Navigation Co., Ld. (Preferred) Do. Do. (Deferred)	1882	m £600,000	2) 60,000 2) 60,000	£5	£5	i £148,891	£15,162	31-12-08	6/- for 1907 on pref. share only at ex. 1/9 11/16, $3.154	....	$68 sales
"Shell" Transport & Trading Co., Ld.	1898	£ 2,000,000	2,000,000	£1	£1	£720,000 i £100,000	£192,994	31-12-08	3rd interim of 2/- per share (coupon No. 12) making in all 4/- for 1908, and interim of 1/- for account 1909	5%	94/-
"Star" Ferry Co., Ld.	1898 1900	$200,000	10,000 10,000	$10 $10	$10 $5	$65,000 i $48,980	$3,121	30-4-09	$1.00 50 cts. for year ended 30-4-09	4 3½	$24¾ $14 sellers
REFINERIES.											
China Sugar Refining Co., Ld.	1878	$2,000,000	20,000	$100	$100	e $520,000 r $83,620	Dr. $8,090	31-12-09	$10 per share for 1909	3¼	$167 sellers
Luzon Sugar Refining Co., Ld.	1882	$700,000	7,000	$100	$100	none	Dr. $101,851	31-12-09	$3 for 1897	....	$26 sellers
Perak Sugar Cultivation Co., Ld.	—	Tls. 350,000	7,000	Tls. 50	Tls. 50	Tls. 100,000	Tls. 6,302	31-8-09	Tls. 10 for year ending 31-8-09	....	Tls. 900 sellers
MINING.											
Chinese Engineering & Mining Co., Ld.	1901	£1,000,000	1,000,000	£1	£1	d £215,000 h £84,390	£1, 5	28-2-09	Final of 1/6 making 3/- for 09	7	Tls. 18
Headwaters Mining Co.	1908	₱600,000	28) 60,000	₱10	₱10				First year		₱10 buyers
Raub Australian Gold Mining Co., Ld	1892	£200,000	150,000 50,000	£1 £1	18-10 £1	£4,873	Dr.	..	1/2 per share, 13th div	....	$7¾ sellers
DOCKS, WHARVES AND GODOWNS.											
Fenwick (Geo.), & Co., Ld.	1889	$450,000 s	18,000	$25	$25	$25,275	Dr $8,460	31-12-09	$1¾ for year ending 31-12-06	....	$10
Hongkong & Kowloon Wharf & Godown Co., Ld.	1886	$3,000,000	60,000	$50	$50	$550,000 t $31,993 i $40,000	$264,847	31-12-09	$2½ for 1909	5	$57 buyers
Hongkong & Whampoa Dock Co., Ld.	1866	$2,500,000	50,000	$50	$50	i $88,412 v $221,000	$132,765	31-12-09	Interim of $1½ for account 1909	..	$56 sales
Shanghai Dock & Engin'g Co., Ld.	1906	Tls. 5,570,000	13) 55,700	Tls. 100	Tls. 100	Tls. 1,000,000	Tls. 6,261	30-4-09	Interim of Tls. 2½ for account 1910	6¼	Tls. 78
Shanghai & Hongkew Wharf Co., Ld.	1902	Tls. 3,600,000	36,000	Tls. 100	Tls. 100	b Tls. 697,257 r Tls. 70,000 a Tls. 125,000	Tls. 9,222	31-12-09	Final of Tls. 4 for 1909	7	Tls. 121
LANDS, HOTELS AND BUILDINGS.											
Anglo-French Land Investment Co., Ld.	1906	Tls. 2,500,000	3) 25,000	Tls. 100	Tls. 100	Tls. 135,000	Tls. 4,314	29-2-09	Tls. 6 for year ending 29-2-09	5¾	Tls. 104
Central Stores, Ld.	....	$751,845	16) 50,123	$15	$15	n. $1,000	$24,641	31-12-08	$1.20 on old & 60 cts. on first new issue	....	$16 buyers
Hongkong Hotel Co., Ld.	1866	$600,000 $400,000	12,000 8,000	$50 $50	$50 $25	$648,975 r $10,000	$1,277	31-12-09	$2.60 on old shares, $1.30 on new shares, for ½ year ending 31-12-10	....	$107½ sales $83½ ex div. new
Hongkong Land Investment & Agency Co., Ld.	1889	$5,000,000	50,000	$100	$100	e $250,000	$27,971	31-12-09	Final of $3½ making $7 for year ending 31-12-1909	6½	$101 sellers
Humphreys' Estate & Finance Co., Ld.	1887	$1,500,000	150,000	$10	$10	i $226,945 20) $25,856	5,471	31-12-09	45 cents for 1909	7½	$8½ sellers
Kowloon Land & Bldg. Co., Ld.	1889	$300,000	6,000	$50	$30	none	$269	31-12-09	$2½ for 1909	5	$31½ buyers
Shanghai Land Investment Co., Ld.	1888	Tls. 3,900,000	78,000	Tls. 50	Tls. 50	Tls. 1,523,045 e Tls. 300,000	Tls. 63,969	31-12-09	Final of 6% bonus Tls. 1 for 1909	6¾	Tls. 106 sales
West Point Bldg. Co., Ld.	1889	$625,000	12,500	$50	$50	none	$1,958	31-10-09	Final of $1.80 for 1909 making in all 3.80 per share for 09	8¾	$40 sellers
COTTON MILLS.											
Ewo Cotton Spinning & Weaving Co., Ld.	1895	Tls. 1,000,000	5) 20,000	Tls. 50	Tls. 50	Tls. 250,000 Tls. 40,098	Tls. 10,991	31-10-09	Tls. 11 for year ended 31-10-09	8½	Tls. 130
Hongkong Cotton Spinning, Weaving & Dyeing Co., Ld.	1901	$1,250,000	125,000	$10	$10	e $20,000	$26,297	30-7-09	50 cents for year ending 31-7-08	..	$6½ sellers

FAR EASTERN STOCKS AND QUOTATIONS—(CONTINUED.)

STOCK.	WHEN ESTABLISHED	CAPITAL.	NO. OF SHARES.	VALUE.	PAID UP	RESERVE	AT WORKING ACCOUNT.	DATE.	LAST DIVIDEND.	Approximate Yield per cent. per annum at Present Quotation.	CLOSING QUOTATIONS
International Cotton Manufacturing Co., Ld.	1895	Tls. 750,000	6) 10,000	Tls. 75	Tls. 75	Tls. 175,000	Tls. 8,372	30-9-09	Tls. 7½ for year ending 30-9-09	---	Tls. 62½
Laou-kung-mow Cotton Spinning & Weaving Co., Ld.	1895	Tls. 800,000	8,000	Tls. 100	Tls. 100	none	Tls. 4,829	31-12-08	Tls. 6 for 1909	---	Tls. 73
Soy Chee Cotton Spinning Co., Ld	1895	Tls. 1,000,000	2,000	Tls. 500	Tls. 500	Tls. 31,172	Tls. 31,173		Tls. 25 for 1909	---	Tls. 250
MISCELLANEOUS.											
Bell's Asbestos Eastern Agency, Ld.	1895	£5,377.10s.	11) 8,604	12/6	12/6	£1,500	£682	31-12-08	15% for 1908		$10 sellers
China-Borneo Co., Ld.	1903	$720,000	8) 60,000	$12	$12	$40,000	Nil.	31-12-08	5% for 1909	10	$10½ sellers
China Light & Power Co., Ld.	1901	$550,000	50,000	$10	$10	none	$46,483	31-7-09	60 cents for year ending 28-2-06		$1.80 sellers
Do. do. Special Shares	1907		17) 50,000	$1	$1						
China Provident Loan & Mortgage Co., Ld.	1898	a $1,250,000	7) 125,000	$10	$10	$100,000	$2,602	31-12-09	80 cents for 1909		$18¾ sellers
Dairy Farm Co., Ld.	1896	$300,000	40,000	$7½	$6	l $10,000 $10,000	$1,850	31-7-09	$1.20 for year ending 31-7-09	8½	$19 buyers
Green Island Cement Co., Ld.	1897	$4,000,000	400,000	$10	$10	$14,000	$4,290	31-12-09	Final of 40 cts. making in all 75 cts. per share for 1909	10	$7½ sellers & sales
H. Price & Co., Ld	1907	$120,000	19) 15,000	$10	$10	$5,000	$670	31-12-08	80 cents for year ending 31-12-08	8	$12
Hongkong Electric Co., Ld.	1889	$600,000	60,000	$10	$10	none	$11,798	28-2-10	A dividend of $1.20 per share and a bonus of 10 cents	6	$19½ sellers
Hongkong Ice Co., Ld.	1881	$125,000	5,000	$25	$25	k $150,000	$12,662	31-12-09	Final of $8 per share making in all $10 1909	10	$160 sellers
Hongkong Rope Manufacturing Co., Ld.	1883	$600,000	$60,000	$10	$10	$40,000	$9,176	31-12-09	Final of $1 making in all $2 for 1909	8½	$21¼ sellers
Maatschappij tot Mijn-, Bosch- en Landbouwexploitatie in Langkat	1902	Gs. 2,500,000	25,000	Glds. 100	Glds. 100	f Tls. 547,500 Tls. 63,914 21 Tls. 547,500	Tls. 316,682	31-10-08	Interim of Tls. 12½ for 1910	8½	Tls. 1400
Peak Tramways Co., Ld.	1907	$750,000	25,000	$10	$10	$20,000	$2,204	30-4-09	80 cents on fully paid shares & 8 cents on $1 paid shares for year ending 30-4-09	6	$14½
Do. (New)			50,000	$10	$1					3	$1.50 buyers
Philippine Co., Ld.	1904	$750,000	75,000	$10	$10	none	Ps. 18,640	31-12-08	None	---	$10 buyers
Robinson Piano Co., Ltd.	1900	$200,000	22) 4,000	$50	$50	$5,000	$61,138	31-8-08	6% for ½ year ending 30.9.07	---	$50 sellers
Shanghai-Sumatra Tobacco Co., Ld.	1902	Tls. 600,000	9) 30,000	Tls. 20	Tls. 20	Tls. 24,820 w Tls. 75,000	Tls. 5,250	31-10-08	Final of Tls. 5 making Tls. 8 for 1908	4¾	Tls. 315 sellers
South China Morning Post, Ld.	1903	$150,000	6,000	$25	$25	none	Dr. $31,096	31-8-09	None	---	$25 buyers
Steam Laundry Co., Ld.	1902	$100,000	20,000	$5	$5	none	$63	31-5-09	40 cents for year ending 30-5-09	7	$5 buyers
Union Waterboat Co., Ltd.	1905	$500,000	15) 50,000	$10	$10	w $11,956	..	31-12-08	60 cents for year-end. 31-12-1908	5	$9 sellers
United Asbestos Oriental Agency, Ld.	1896	$100,000	10,000	$10	$4	$46,000	$342	31-5-09	60 cents per ordinary share for year ending 31-5-09	6½	$11½ sellers
Watson (A. S.) & Co., Ld.	1886	$900,000	90,000	$10	$10	e) $300,000 $25,000	$2,613	31-12-08	Final of 30 cents making 60 cents for 1908	6¾	$6 buyers
Weismann Limited	1904	$30,000	3,000	$10	$10	$12,250	$67	31-7-09	10 per cent for year endg. 31.7.08.	---	$10 buyers
William Powell, Ld.	1901	$105,000	15,000	$7	$7	none	$782	30-6-09	Final of 30 cents making 80 cents year ending June 30th 1906	---	$3 sellers
RUBBERS											
Allagar Rubber Estates, Ltd.	1909	£85,000	29) 750,000	2/-	2/-	----	----	----	----------	---	7/-
Anglo-Malay Rubber Co., Ltd.	1905	£150,000	1,500,000	2/-	2/-	----	----	----	Interim of 6d for a/c 1910	---	32/-
Balgownie Rubber Estate, Ltd.	1905	†† $200,000	‡‡ 20,000	†† $2	†† $2	$7,400	$11,205	31-3-09	20% Interim for 1909	---	$24 [S'pore]
Castlefield Rub. Ld., [fully pd.]	1906	£35,000	27) 32,650	£1	£1	none	----		----------		120/-
Damansara (Selangor) Rub. Co.	1906	£110,000	25 110,000	£1	£1	nil.	£2,220	31-12-08	2/6 for 1909	---	185/-
Golconda Malay Rubber Co.	1907	£80,000	26 80,000	£1	£1	nil.	nil.	----	----------	---	140/-
Highland & Lnd. Para R. Co.											
Do. Do. [fully paid]	1906	£310,000	=181,454	£1	£1	£8,784	----	----	7½% for 1909 (interim.)		155/- ex rights
Do. Do. [partly paid]			123,546	£1	15/-						Nominal
Kamuning (Perak) Rb. & Tin Co.			950,000	2/-	1/-	nil.	nil.	----	----------	---	11/- prem
do do A Shares	1909	£200,000			£1						
do do B Shares			105,000	£1		----	1,82	----	----------		
Kuala Lumpur Rubber Co., Ltd.	1906	£180,000	180,000	£1	£1	£4,000	----	----	A final dividend of 2/- for 1909	---	225/-
Linggi Plantations, Ltd. (ord.)	1895	£100,000	×900,000	2/-	2/-						65/-
Do. Do. (7% pref.)	Reconst		10 000	£1	£1	----	----	----	----------	---	Nominal
Ledbury Rubber Estates Ltd.	1908	£125,000	§§ 60,000	£1	£1	----	----	----	----------	---	112/6
Do. Do. (contrib.)			§§ 40,000	£1	7/6						58/6
Sagga Rubber Co. Ld.	1903	£20,000	24) 2,000	£1	£1	nil.	nil.		----------	---	320/-
Sandycroft Rubber Co.	1904	$100,000	50,000	$2	$2	$20,000	$1,275	31.1.08	Interim of 30% for 1909	---	$43 b. ex rights & div.
Sekong Rubber Co., Ld	1908	£80,000	27) 80,000	£1	12/6	nil.	nil.	----	----------		40/- prem.
Shelford Rubber State Ld.	1906	£65,000	65,000	£1	£1	nil.	£836	31.12.08	3% for 1908	---	85/-
Singapore & Johore Rb. Co., Ld.	1903	$250,000	2,500	$10	$10	nil.	nil.	----	----------	---	$22
Sungei Choh. Rb. State Co., Ld.	1907	£45,000	45,000	£1	17/-	nil.	nil.	----	----------	---	122/6
Sungei Kapar Rubber Co.	1906	£110,000	23) 110,000	£1	£1	nil.	£3,448	31.12.08	8½% Interim for 1909	---	205/-

LOANS AND DEBENTURES.	AGENTS FOR THE LOAN.	AMOUNT OF LOAN.	PAR VALUE.	OUTSTANDING BONDS.	WHEN PAYABLE.	CLOSING QUOTATIONS.	
China Government, 7 per cent. Silver Loan 1886 E.	Hongkong & Shanghai Banking Corporation.	Tls. 767,200	Tls. 250	1914	Mar. 31st and Sept. 30th each year until Mar. 31st, 1917	par.	Plus interest
Hongkong Hotel Company, Ltd., 6 per cent. Mortgage Debentures of 1899 ‡		$750,000	$500	§ all	Half yearly, June 30th and December 31st	par	
Shanghai & Hongkew Wharf Company, Ltd., 6 per cent. Debentures of 1902		Tls. 543,900	Tls. 100	--------	Half yearly, June 30th and December 31st	Tls. 103½	
Astor House Hotel Company, Ltd., 8 per cent. Debentures of 1903		Tls. 500,000	Tls. 100	--------	Half yearly, January 1st and July 1st	102½	
Chinese Engineering & Mining Co., Ltd., 6 per cent. Debentures of 1903 †	---------	£500,000	¶	£431,960	Half yearly, June 30th and December 31st	par.	
International Cotton Manufacturing Co., Ltd. 7% Debentures of 1901	Russo Chinese Bank	Tls. 500,000	Tls. 100	‖	Half yearly, March 31st and Sept. 30th	Tls. 97½.	

a Authorized capital $2,000,000.
b Building Reserve Account.
c Capital Reserve Fund.
d Depreciation Fund.
e Equalization of Dividend Fund.
f Exchange and Investment Fluctuation Account.
g Gold Reserve Fund
h Exchange Reserve Account.
i Insurance Fund.
j Reinsurance Fund.
k Contingencies Account.
l Legal Reserve Fund.
m Authorized Capital
n Sinking Fund.
o Raw Sugar Reserve Account.
p Premium on New Issue.
q Boiler Repairs and Renewals Account
r Repairs and Renewals Account.
s Silver Reserve Fund.
t Depreciation and Repair Account
u Underwriting Suspense Account.
v Special account
w Special Works Fund.
x Extra Reserve Fund.
y 72,560 owned by the Company.
z 7,200 shares unissued.
1 4,000 shares unissued.
2 First issue of 60,000, of which 10,411 unallotted.
3 5,000 shares unissued.
4 4,480 shares unissued.
5 5,000 shares unallotted.
6 1,616 shares unallotted.
7 75,000 shares unissued.
8 14,000 shares unissued.
9 17,000 shares unissued.
10 40,453 shares actually issued.
11 7,688 shares actually issued.
12 4,200 shares unissued.
13 500 shares unissued.
14 399 shares unissued.
15 22,277 shares unissued.
16 10,000 shares unissued.
17 Special shares are entitled to half of the profits.
18 Capital contributed by Chinese Government-Kuping Tls. 5,000,000.
19 12,000 issued only.
20 Typhoon and Floods Insurance Fund
21 Special Cash Reserve.
22 1000 shares unissued.
23 10,000 shares unissued.
24 4595 part paid shares.
25 7,500 shares unissued.
26 10,000 shares unissued.
27 2,350 shares unissued.
28 25,000 shares unissued.
29 100,00 shares unissued.
*Based on last year's dividend.
** Based on present dividend.
§ 216 held by the Company.
‖ Only Tls. 134,000 taken up.
¶ In certificates of £20 and £100.
‡ Redeemable in 10 years, or at option of Comp., the Company giving 6 months notice.
† Redeemable at par at rate of £10,000 per annum from 31st December 1903 to 31st December 95.
*** Redeemable at par on 30th June, 1915.
Dr. Deficit.
†† Singapore dollars.
‡‡ 4,880 shares unissued.
× 16,756 shares unissued.
§§ 25,000 shares unissued.
4140 shares unissued.

ADDITIONAL SHANGHAI SHARE QUOTATIONS

May 28, 1910

STOCK	CLOSING QUOTATIONS	HIGHEST AND LOWEST PRICES DURING THE WEEK	CAPITAL	NO. OF SHARES	VALUE	PAID UP	RESERVE	LAST DIVIDEND	WHEN PAID
Oriental Consolidated Mining Co., Ltd	35|10		G. $5,000,000	500,000	G. $10	G. $10	none	Total of Gold 1.15 for 1909	Jan. 10, 1910
Vulcan Iron Works, Limited	Tls. 40		Tls. 500,000	1,000	Tls. 500	Tls. 500	—	Tls. 50 for year ended 31.8.06	Nov. 1, 1906
Yangtsze Wharf & Godown Co., Limited	Tls. 207		Tls. 250,000	2,500	Tls. 100	Tls. 100	Tls 50,000	Tls. 15 for 1909	April 1, 1910
Wei-hai-wei Land & Building Co., Limited	Tls. 9 nominal		Tls. 91,850	3.674	Tls. 25	Tls. 25	—	Interim of $2.00 for 1909	Aug. 8, 1909
Anglo-German Brewing Co., Limited	$85 buyers		$100,000	4,000	$100	$100	none	5% for 1909	Mar. 12, 1910
Butler Tile Works, Limited	Tls. 25		Tls. 60,000	1,200	Tls. 50	Tls. 50	—	Tls. 3 for year ending 31.3.09	June 8, 1909
Major Bros, Limited	Tls. 55		Tls. 300,000	6,000	Tls. 50	Tls. 50	—	—	—
Oriental Ice Company, Limited	Tls. 20		Tls. 130,000	2,600	Tls. 50	Tls. 50	—	First year	—
Scharffs Oil and Bone Mills, Ltd	Tls. 40		Tls. 200,000	4,000	Tls. 50	Tls. 50	—	First year	—
Shanghai Ice Company, Limited	Tls. 12		Tls. 200,000	8,000	Tls. 25		—	3% for 1907	Mar. 14, 1908
Campbell, Moore & Co., Limited	$10		$12,000	1,200	$10	$10	$9,000	$3 for 1905	Apr. 2, 1906
Dunning & Company, Limited	$35 sellers		$100,000	2,000	$50	$50	—	$5 year ending 28.2.08	Apr. 15, 1908
J. Llewellyn & Co, Limited	$60 nominal		$72,000	1,200	$60	$60	—	7.20 for 1909	May 1, 1910
Lane, Crawford & Company	$150		$250,000	2,500	$100	$100	—	Final of 3% making 6% for 1908	June 8, 1909
S. Moutrie & Company, Limited	$40		$250,000	5,000	$50	$50	—	$4 for year ended March 31, 1909	June 18, 1909
Weeks & Company, Limited	$25 buyers		$400,000	20,000	$20	$20	$40,000	Interim of 80 cents for 1909	Dec. .., 1909
Dominion Rubber Co., Limited	Tls. 62½		Tls. 225,000	22,500	Tls. 10	Tls. 4	—	First year	—
Kalumpong Rubber Co., Ltd	Tls. 700		Tls. 700,000	14,000	Tls. 50	Tls. 50	** Tls. 11,844.48	16% for 1908	Nov. 9, 1909
Senawang Rubber Estates Company, Limited	Tls. 1550		Tls. 250,000	2,500	Tls. 100 Tls. 100	Tls. 100 Tls. 75	—	—	—
Tebong Rubber and Tapioca Estate, Limited	Tls. 48		£76,000	76,000	£1	£1	—	—	—
Shanghai Mercury, Limited	Tls. 50 buyers		Tls. 105,500	2,100	Tls. 50	Tls. 50	—	Interim of 4% for ½ year 1909	June 21, 1909
Shanghai Mutual Telephone Co., Limited	Tls. 67½ buyers		Tls. 675,000	13,500	Tls. 50	Tls. 50	—	Tls. 3 for 1907	June 28, 1909
China Export, Import & Lumber Company, Limited	Tls. 75		Tls. 350,000	500	Tls. 100	Tls. 50	—	5 p. c. for 1909	May 1, 1910
China Printing Co, Limited	Tls. 42½		Tls. 750,000	1,500	Tls. 50	Tls. 50	—	7% 1908	Apr. 18, 1909
Hirano Mineral Water Co., Ltd	Y. 10		Y. 125,000	5,000	Y. 25	Y. 25	—	10%=yen 2½ for year ending 30th Sept. 08 Y. 1.20 for year ended Feb. 29	Apr. 26, 1909
E. E. Porter & Co., Limited	$50		$100,000	2,000	$50	$50	—	$6 for 1907	Apr. 22, 1908
Shanghai Electric & Asbestos Company, Limited	$21 sellers		$125,000	5,000	$25	$25	—	8% for year ended Feb 28, 09	June 21, 1909
Shanghai Electric Construction Company, Limited	£6 sellers	£11	£320,000	32,000	£10	£10	—	First year	—

DEBENTURES

LOANS		PRICE—PLUS ACCRUED INTEREST	AMOUNT OF LOAN	OUTSTANDING	NOMINAL VALUE	RATE OF INTEREST	WHEN PAYABLE
Shanghai Municipal Debentures	1892	Tls. 92½	Tls. 50,000	Tls. 45,400	Tls. 100	5 %	June & Dec.
do	1893	,, 96	,, 125,000	" 32,000	" 100	5½ ,,	Do
do	1894	,, 105	,, 105,000	" 60,000	" 100	6 ,,	Do
do	1895	,, 92½	,, 115,000	" 32,600	" 100	5 ,,	Do
do	1896	,, 92½	,, 140,000	" 131,800	" 100	5 ,,	Do
do	1897	,, 92½	,, 268,800	" 268,400	" 100	5 ,,	Do
do	1898	,, 105	,, 300,000	" 60,000	" 100	6 ,,	Do
do	1900	,, 96	,, 83,900	" 31,700	" 100	5½ ,,	Do
do	1901	,, 105	,, 250,000	" 200,000	" 100	6 ,,	Do
do	1902	,, 105	,, 150,000	" 150,000	" 100	6 ,,	Do
do	1903	,, 105	,, 490.500	" 490,500	" 100	6 ,,	Do
do	1904	,, 105	,, 214,500	" 214,500	" 100	6 ,,	Do
do	1905	,, 105	,, 320.000	" 320,000	" 100	6 ,,	Do
do	1907	,, 105	,, 250,000	" 250,000	" 100	6 ,,	Do
Chinese Imperial Government Loan	1886 E	,, 250	,, 767,200	" 354,400	" 250	7 ,,	Mar. & Sept
Shanghai Land Investment Co., Debentures	1890	,, 103½	,, 250,000	" 250,000	" 100	6 ,,	May & Nov.
do	1892	,, 96	,, 250,000	" 250,000	" 100	5½ ,,	June & Dec.
do	1894	,, 103½	,, 250,000	" 250,000	" 100	6 ,,	Mar. & Sept.
do	1896	,, 92½	,, 250,000	" 250,000	" 130	5 ,,	June & Dec.
do	1900	,, 103½	,, 250,000	" 250,000	" 100	6 ,,	April & Oct.
do	1901	,, 104	,, 250,000	" 250,000	" 100	6 ,,	June & Dec.
do	1901	,, 96	,, 100,000	" 100,000	" 100	5 ,,	May & Nov.
do	1902	,, 103½	,, 400,000	" 400,000	" 100	6 ,,	June & Dec.
do	1905	,, 103¼	,, 250,000	" 250,000	" 100	6 ,,	Do
Shanghai Waterworks Co., Debentures	1909	,, 103	,, 815,900	" 815 900	" 100	6 ,,	Do
Perak Sugar Cultivation Co., Debentures	1902	,, 101	,, 200,000	" 200.000	" 100	7 ,,	April & Oct.
Shanghai Gas Co., Debentures	1909	,, 103	,, 800,000	" 800,000	" 100	5 ,,	Do
Shanghai and Hongkew Wharf Co., Debentures	1902	,, 102	,, 839,100	" 799,800	" 100	6 ,,	June & Dec.
Astor House Co., Debentures	1905	,, 103	,, 750,000	" 500,000	" 100	7 ,,	Do
British Municipal Council, Hankow	1901	Sh. ,, 105	H'kow Tls 100,000	H'kow Tls 100 000	" 100	7 ,,	June & Dec.
Shanghai Club Debentures	1907	,, 100	Tls. 170,000	Tls 170,000	" 100	6 ,,	Do
Country Club Debentures		,, 97	,, 139,000	" 139,000	" 100	6 ,,	Do
do	1907	,, 97	,, 92,000	" 92,000	" 100	6 ,,	Do
Lane Crawford & Co., Debentures	1907	,, 102½	,, 110,000	" 110,000	" 100	7 ,,	Mar. & Sept.
Anglo-French Land Debentures	1908	,, 102	,, 250,000	" 250,000	" 100	6 ,,	June & Dec.
Central Stores Ltd. Debentures	1908	,, 102½	,, 250,000	" 250,000	" 100	8 ,,	Do
Shanghai Mutual Tel. Co. Debentures	1909	,, 102½	,, 350,000	" 200,000	" 100	6 ,,	Do

SINGAPORE SHARE QUOTATIONS

(COURTESY MESSRS. FRASER & CO., BROKERS, SINGAPORE, JUNE 2, 1910)

Date of Formation	Capital	Capital paid up	No. of Shares Issued	Issue Value	Paid up	Reserve	Last Dividend	Name	Buyers.	Sellers.
								MINING		
1906	£30.000	30,000	30.000	1	1	....		Malaya and Siam Corporation Ltd.	....	5|-
1906	£250,000	179,500	500,000e	5/-	5/-	....		Pahang Consolidated Co., Ltd.	7|6	8|6
1903	$300,000	300,000	30,000	10	10	....	10% interim for 1909	Belat Tin Mining Co., Ltd.	4.00	5.00
1907	$300,000	225,000	22,500s	10	10	....		Bruang Ltd.	4.50	5.00
1901	$600,000	600,000	60,000	10	10	25,000	6% for year ending 30-4-09	Bruseh Hydraulic Tin Mining Co., Ltd.	5.00	6.00
1907	$400,000	375,000	37,500b	10	10	....		Kanaboi, Ltd.	2.15	2.50
1991	£60,000	60,000	60,000	1	1	....	2|- interim 1909	Kinta Tin Mines, Ltd.	14.25	14.75
1905	$150,000	99,000	9,900c	10	10	6,485.68	35% for year ending 31-12-07	Kuantan Tin Mining Co., Ltd.	3.00	3.25
1906	£120,000	120,000	120,000	1	1	....	1|- interim 1909	Lahat Mines Ltd.	8.00	9.00
1906	$450,000	450,000	45,000	10	10	....		Malacca Tin Dredging Co., Ltd.	2.50	2.75
1907	£100,000	80,000	80,000a*	1	1	....		Pengkalen. Ltd.	6.50	7.50
1904	£100,000	80,000	80,000	1	1	....		Pusing Bahru Tin Mines, Ltd	8.25	8.50
1904	£120,000	100,000	100,000d	1	1	6,000	45% for year ending 30-6-07	Pusing Lama Tin Mines, Ltd.	....	3.00
1907	$450,000	300,000	30,000y	10	10	....		Rahman Hydraulic Tin, Ltd.	8.50	9.00
1905	£27,000	27,000	27,000	1	1	....	1|- for 1907	Rambutan, Ltd.	13.00	14.00
1892	£200,000	200,000	200,000	1	1	4,873	1|2 paid April, 1910	Raub Aust. Gold Ming. Co., Ltd,	4.75	5.00
1905	£40,000	40,000	40,000	1	1	....		Redhills Tin Mining Co., Ltd.	3.00	3.50
1900	$110,000	110,000	22,000	5	5	....	3% for year ending 22-1-09	Royal Johore Tin Mining Co., Ltd.	1.35	1.50
1907	$550,000	500,000	50,000f*	10	10	....		Salak South, Ltd.	4.00	5.00
1907	£80,000	80,000	80,000	1	1	....		Sempam Tin Mines, Ltd.	2.35	2.50
1906	$850,000	850,000	85,000	10	10	25,000	5% interim for 1909	Serendah Hydraulic Tin Ming. Co., Ltd.	6.50	7.50
1899	$230.000	230,000	23,000	10	10	....	3% for ½ year ending 31-12-08	Sipiau Tin Co., Ltd.	1.50	1.75
1909	$200,000	$150,000	15,000	10	10	....		Sungei Gau Tin Mining Co., Ltd.	4.50	5.00
1907	£90,000	70,000	70,000t	1	1	....	1|6 interim 1909	Tekka, Limited.	21.00	22.00
1906	£150,000	150,000	150,000	1	1	....	1|- interim 1909	Tongkah Harbour Tin Dredging Co., Ltd.	12.75	13.00
1902	£160,000	160,000	160,000	1	1	....	3|- interim 1909	Tronoh Mines, Ltd.	13.00	14. 0

SINGAPORE SHARE QUOTATIONS.—(CONTINUED.)

Date of Formation	Capital	Capital paid up	No. of Shares Issued	Issue Value	Paid up	Reserve	Last Dividend	Name	Buyers.	Sellers.
								STERLING RUBBER		
1909	£85,000	75,000	750,000x*	2/-	2/-	—		Allagar Rubber Estates, Ltd	6/3	7/3
1905	£150,000	150,000	1,500,000	2/-	2/-	—	80% for year ending 31-12-09	Anglo-Malay Rub. Co., Ltd.	1.8.6	1.10.0
1909	£50,000	35,250	470,000g‡	2/-	1/6	—		Batang Malaka Rubber Estates, Ltd	2/-	3/- p.
1904	£30,000	20,187 10/-	19,000	1	1	—	50% for year ending 31-12-1909	Batu Caves Rub. Co., Ltd	17.0.0	18.0.0
			4,750f	1	5/-	—				
1906	£80,000	70,000	70,000l*	1	1	—	2½% interim 1909	Batu Tiga (Selangor) Rubber Co., Ltd.	5.2.6	5.10.0
1909	£100,000	68,908	57,816	1	1	—		Bukit Kajang Rubber Estates, Ltd	3.5.0	3.15.0
			22,184n*	1	10/-	—		" " " *part paid*	2.7.6	2.10.0p.
1907	£30,000	25,500	24,000e*	1	1	—		Bukit Lintang Rubber Estates, Ltd	5.5.0	5.15.0
			6,000	1	5	—		" " " *part paid*	2.5.0	2.10.0p.
1903	£70,000	66,700	66,700g	1	1	2,000	60% interim 1909	Bukit Rajah Rubber Co., Ltd.	20.0.0	22.0.0
1906	£35,000	30,000	30,000s*	1	1	—		Castlefield (K.) R. Estate, Ltd.	5.15.0	6.5.0.
1909	£225,000	175,000	1750,000t*	2/-	2/-	—		Chersonese (F.M.S.) Estates, Ltd	4/9	5/6
1904	£16,000	16,000	100,000	2/-	2/-	—	25% interim 1909	Cicely Rubber Estates Co., Ltd	2.10.0	2.12.6
			60,000	2/-	2/-	—	26¼% interim 1909	" " " " *5% Pref.*	2.10.0	2.12.6
1905	£75,000	62,007	620,070i	2/-	2/-	1,000	80% for 1909	Consolidated Malay Rub. Estates, Ltd	1.11.6	1.13.6
1906	£110,000	102,500	102,500k*	1	1	—	50% for year ending 31-12-09	Damansara (Selangor) Rubber Co., Ltd.	8.12.6	9.2.6
1903	£600,000	444,200	444,200a	1	1	—		Duff Development Co., Ltd.	1.5.0	1.7.6
1909	£45,000	40,000	40,000p*	1	1	—		Edinburgh Rub. Estates, (Selangor) Ld.	6.0.0	7.0.0
1907	£80,000	70,000	70,000n	1	1	—		Golconda Rubber Co., Ltd.	6.17.6	7.2.6
1906	£310,000	305,000	305,000j	1	1	8,784	15% interim 1909	Highlands & Lowds. Para Rub. Co., Ltd.	6.12.6	6.17.6
1904	£50,000	30,000	30,000q*	1	1	2,500	25% interim	Inch Kenneth Rubber Estates, Ltd	17.12.6	18.5.0
1909	£200,000	182,500	950,000p	2/-	1/-	—		Kam. (P.) R. & T. Co., Ltd. "A" Shares	8/6	9/- p.
			105,000	1	1	—		" " " " "B" "	—	nom.
1905	£65,000	65,000	65,000	1	1	—	10% for year ending 31-12-09	Kapar Para Rubber Estates, Co., Ltd.	9.10.0	10.0.0
1909	£35,000	£18,750	90,000	2/-	2/-	—		Kota Tinggi Johore Rubber Co., Ltd.	4/-	5/-
			160,000	2/-	1/-	....		" " " "	2/-	2/6 p.
1906	£180,000	180,000	180,000	1	1	—	30% interim	Kuala Lumpur Rubber Co., Ltd	8.10.0	9.10.0
1907	£100,000	90,000	900,000h*	2/-	2/	—	25% for year ending 31-12-09	Labu (F. M. S.) Rub. Co., Ltd. *part paid*	17/6	19/6
1907	£320,000	269,780	198,930v	1	1	3,000	10% interim 1909	Lanadron Rubber Estates, Ltd.	6.15.6	7.5.0
			70,850	1	15/-	—	10% interim 1909	" " " *part paid*	5.5.0	5.15.0p.
1908	£125,000	75,000	60,000g*	1	1	—		Ledbury Rubber Estates Ltd.	5.0.0	5.5.0
			40,000	1	7/6	—		" " " *part paid*	3.5.0	3.10.0p.
1895	£100,000	98,324 8/-	883,244w	2/-	2/-	4,000	165% for year ending 31-12-09	Linggi Plantations Ltd.,	3.1.0	3.3.0
			10,000	1	1	—	7% for year ending 31-12-08	" " " *7% Pref.*	—	nom.
1907	£140,000	118,000	118,000k	1	1	—	3% for year ending 31-12-08	London Asiatic R. & Produce Co., Ltd.	7.5.0	7.15.0
1909	£220,000	125,000	50,000	1	1	....		Lumut Rubber Estates, Ltd.	3.0.0	3.10.0
			150,000	1	10/-	—		" " " " *part paid*	32/6	40/- p.
1906	£400,000	300,000	185,000	1	1	—	10% interim for 1909	Malacca Rubber Plants., Ltd.	13.10.0	14.0.0
			115,000	1	1	....	" " "	" " " " *7½% Pref.*	13.10.0	14.0.0
1909	£210,000	175,000	1,750,000	2/-	2/-	—		Merlimau Rubber Estates, Ltd	7/-	8/-
1903	£30,000	22,500	225,000l	2/-	2/-	—	125% for year ending 31-12-09	Pataling Rubber Estates Synd. Ltd	3.6.0	3.10.0
1906	£85,000	85,000	85,000	1	1	—	12½% interim for 1909	Perak Rubber Plantations, Ltd	5.15.0	6.5.0
1909	£60,000	36,875	15,000z*	1	1	—		Rembia Rubber Estates Ltd.	1.15.0	2.0.0
			35,000	1	12/6	—		" " " *6% Cum. Pref.*	13/6	17/6 p.
1904	£20,000	18,752	20,000u	1	1	....		Sagga Rubber Company, Limited	16.0.0	17.0.0
1905	£100,000	100,000	71,378 28,622l‡	1	1	....		Sapong Rubber and Tobacco Estates, Ltd.	1.12.6	1.15.0
1907	£100,000	100,000	100,000	1	1	—	15% for year ending 31-12-09	Seafield Rubber Co., Ltd	7.12.6	8.5.0
1898	£30,000	30,000	300,000	2/-	2/-	3,000	287½% for year ending 31-12-09	Selangor Rubber Co., Ltd	3.10.0	3.12.6
1909	£50,000	32,000	40,000e‡	1	16/-	—		Sendayan (F. M. S.) Rubber Co., Ltd	2.0.0	2.7.6 p.
1906	£65,000	65,000	65,000	1	1	—	7½% for year ending 31-12-09	Shelford Rubber Estate, Ltd	3.15.0	4.5.0
1909	£150,000	100,000	100,000i‡	1	15/-	—		Sialang Rubber Estates, Ltd	1.12.6	1.15.0p.
1909	£120,000	100,000	100,000s*	1	1	—		Singapore Para Rubber Estates, Ltd.	3.15.0	4.0.0
1906	£192,500	192,500	1,925,000	2/-	2/-	—	7½% interim 1909	Straits Settlements (B.) Rub. Co., Ltd	8/-	9/-
1907	£45,000	40,500	12,600	1	1	—		Sungei Choh Rub. Estate, Co. Ltd. *Fully pd.*	5.5.0	6.0.0
			32,400	1	17/6	....		" " " " *part paid*	4.5.0	4.10.0p.
1906	£110,000	100,000	100,000c*	1	1	....	37½% for year ending 31-12-09	Sungei Kapar Rubber Co., Ltd	9.7.6	10.0.0
1907	£70,000	55,000	55,000	1	1	....		Sungei Salak Rubber Co., Ltd	4.12.6	5.0.0
1904	£50,000	50,000	50,000	1	1	—		Sungei Way (Selangor) Rub. Co., Ltd	6.0.0	6.10.0
1908	£150,000	60,000	36,000	1	1	—		Tebrau (Johore) Rubber Co	5.0.0	5.5.0
			64,000	1	7/6	—		" " " *part paid*	3.2.6	4.0.0 p.
1907	£200,000	170,000	170,000j*	1	1	—	5% interim 1910	United Serdang (S.) R. Plantations, Ltd.	7 0.0	8.0.0
1908	£85,000	65,000	650,000	2/-	2/-	—	10% for year ending 30-6-09	United Sumatra Rubber Estates, Ltd.	11/6	12/6
1904	£60,000	50,600	506,000m	2/-	2/-	....	25% interim for 1909	Vallambrosa Rubber Co., Ltd.	2.9.0	2.13.0
								DOLLAR		
1909	$120,000	105,000	105,000w*	1	1	....		Alor Gajah Rubber Estate, Ltd	3.50	4.00
1909	$750,000	600,000	140,000b‡	5	5	....		Ayer Panas Rubber Estates, Ltd	11.00	11.25
1905	$200,000	151,200	151,200 x	1	1	5,250	100% for year ending 31-3-1910	Balgownie Rub. Estate, Ltd	19.00	20.00
1910	$500,000	500,000	50,000	10	10	—		Bukit Timah Rubber Estates, Ltd.	19.00	21.00
1910	$750,000	700,000	70,000h‡	10	10	—		Changkat Serdang Estates. Ltd	16.00	17.00
1909	200,000	62,500	12,500	10	5	—		Cheras Rubber Estates, Ltd	9.00	— p.
1909	$550,000	475,000	475,000v*	1	1	....		Elphinstone Estates, Ltd	3.50	4.00
1909	$300,000	300,000	300,000	1	1	—		Glenealy Plantations, Ltd.	3.00	3.25
1910	$200,000	164,285	12,857m‡	5	5	—		Haytor Rubber States, Ltd	—	nom.
			20,000	5	4	—		" " " " *part paid*	7.00	8.00 p.
1910	$600,000	150,000	30,000c‡	10	5	....		Henrietta Estates, Ltd.	3.00	5.00 p.
1906	$680,000	680,000	40,000	17	17	—		Hevea Rubber Planting Co. Ltd.	19.00	21.00
1909	$250,000	200,000	20,000a‡	10	10	—		Indragiri (S.) R. and Gutta P. Co., Ltd.	28.00	30.00
1910	350,000	291,000	55,000	5	5	....		Kelemak Rubber Estate, Ltd	5.00	5.25
			59,000	5	4	....		" " " *part paid*	0.10	0.25 p.
1907	$300,000	200,000	20,000d‡	10	7	—		Kombok Rubber Co., Ltd	20.00	25.00p.
1909	$400,000	400,000	80,000	5	5	—		Pajam Limited.	17.00	18.00
1909	$200,000	200,000	200,000	1	1	—		Pantai, Limited	2.00	2.50
1909	$500,000	450,000	45,000m*	10	10	—		Pegoh, Limited	45.00	45.00
1910	$450,000	295,000	45,000f‡	5	5	—		Port Dickson Rubber Co., Ltd	15.00	16.00
			35,000	5	2	—		" "	6.00	7.00 p.
1904	$100,000	100,000	50,000b*	2	2	20,000	150% for year ending 31-1-10	Sandycroft Rubber Co., Ltd	37.00	38.00
1905	$500,000	500,000	5,000	100	100	—		Singapore Rubber Co., Ltd.	400.00	450.00
1903	$425,000	328,800	121,150	2	2	—	20% for year ending 31-12-09	Singapore & Johore Rub. Co., Ltd	16.50	17.00
			87,500	2	1	—	" " " "	" " " *part paid*	15.00	16.00 p.
1909	$250,000	100,000	10,000o*	10	10	....		St. Helena Rubber Coy., Ltd	40.00	45.00
1909	$200,000	165,000	33,000p*	5	5	....		Teluk Anson Rubber Estate, Ltd	8.00	9.00
1909	$1,000,000	637,500	737,500y*	1	1	....		United Singapore Rubber Estates, Ltd.	2.80	3.00
				1	-/50	....		" " " " "	—	nom.
								GENERAL		
1903	£400,000	400,000	400,000	1	1	—		Singapore Electric Tramways, Co., Ltd.	4/3	4/6
1907	$1,500,000	1,065,150	25,000d*	10	10	—	10% for year ending 31/12/08	Eastern Smelting Co. Ltd	—	10.00 n.
			116,450	10	7	—	10% for year ending 31-12-08	" " " *part paid*	—	7.00
1898	$225,000	225,000	4,500	50	50	170,000	15% & 5% bon. for yr. end. 31-12-09	Fraser & Neave, Ltd.	200.00	205.00
1905	$2,400,000	2,400,000	18,000	100	—	75,000	2½% for year ending 31-10-08	Howarth Erskine, Ltd	60.00	61.00
			6,000	100	—	—	7% for year ending 31-10-08	" " *7% Pref*	90.00	92.50
1896	$1,000,000	1,000,000	6,000	100	100	40,600	12% for year ending 31-12-09	Katz Brothers, Ltd. *Deferred*	—	125.00
			4,000	100	100		8% " " " "09	" " *8% Cum. Pref*	—	nom.
1901	$34,000	34,000	3,400	10	10	—	20% for year ending 31-10-09	Maynard & Co., Ltd.	22.00	22.50
1899	$875,000	875,000	6,000	100	100	175,000	5% for year ending 31/12/09	Riley, Hargreaves & Co., Ltd	77.50	82.50
			2,750	100	100	—	7% for year ending 31/12/09	" " " " *7% Pref*	100.00	—
1903	$600,000	250,000	25,000n	10	10	—	10% for year ending 30-6-09	Singapore Cold Storage Co., Ltd	15.00	16.00
1891	$30,000	30,000	600	50	50	23,000	10% for year ending 31-7-09	Singapore Dispensary Ltd.	52.50	54.00
1884	$200,000	200,000	2,000z	100	100	75,000	15% for year ending 31-12-09	Straits Ice Co., Ltd	155.00	165.00
1890	$500,000	498,000	4,980	100	100	760,000q	10% for year ending 31-12-09	Straits Steam Ship Co., Ltd	220.00	240.00
1887	$3,000,000	3,000,000	300,000	10	10	130,000r 1,222,409	10% & 5% bon. for half yr. end. 30/9/09	Straits Trading Co., Ltd.	59.00	60.00

a 152,800 unissued; 43,949 6% debenture
b 2,500 unissued
c 5,100 "
d 20,000 "
e 54,500 £1 Prefs. issued; 45,500 £1 " unissued; 100,000 5/- Ord. "
f 6,250 unissued
g 3,300 "
h 12,930 "
i 5,000 "
j £40,000 6% Debentures 22,000 unissued
k 75,000 unissued
l 94,000 "
m 35,000 "

n 20,000 unissued
o 175,000 unissued "A" shares
p Sundry Reserves.
q "
r 7,500 unissued
s 20,000 "
t 2,268 9/- paid shares
u 50,220 unissued
v 16,756 "
w 4,880 "
x 15,000 "
y 20 unissued
z 20,000 "
*a** 221 7½% Debentures
*b** 10,000 unissued
*c** 8,550 "

*d** 5,000 unissued
*e** 25,000 "
*f** 10,000 "
*g** 30,000 "
*h** 7,500 "
*i** £10,000 Convertible 6% Debentures issued £10,000 do. unissued
*j** 5,000 unissued
*k** 20,000 "
*l** 15,000 "
*m** 7,000 "
*n** 20,000 "
*o** 5,000 "
*p** 500,000 "
*q** 15,000 "
*r** 75,000 "

*s** 15,000 unissued
*t** 100,000 "
*u** 262,500 "
*v** 10,000 "
w‡ 5,000 "
x‡ 30,000 "
y‡ 30,000 "
z‡ 10,000 "
a‡ 10,000 "
b‡ 10,000 "
c‡ 30,000 "
d‡ 5,000 "
e‡ 50,000 "
f‡ 70,000 "
g‡ 35,000 "
h‡ 6% Deb. Stock Convertible.
i‡ 7,143 unissued.

DEBENTURES

Name	Buyers.	Sellers.
Howarth Erskine, Ltd. 6% $ 600,000	—	par.
Riley, Hargreaves & Co., Ltd. 6% 284,000	1%	3% p.
Singapore Electric Tramways, Co., Ltd. 5% £350,000	—	—
Singapore Municipal 5% 1,878,000	—	nom.
" " 4½% of 1907 1,600,000	6%	7% p.
" " 4½% of 1909 1,000,000	7%	8% p.
" 4% 602,900	—	7% d

YOKOHAMA SHARE QUOTATIONS

COURTESY A. C. HUTTON POTTS, SHARE AND GENERAL BROKER, YOKOHAMA, JUNE 2ND, 1910.

STOCKS.	CAPITAL.	NO. OF SHARES.	ISSUE VALUE.	AMOUNT PAID UP.	RESERVE FUND.	AT WORKING ACCOUNT OR CARRIED FORWARD.	DATE.	LAST DIVIDEND.	FOR TERM.	CLOSING QUOTATION.
Brett & Co., Ltd.	-Y- 28,000	2,800	-Y- 10	-Y- 10			31-12-09	12½%	for 1 year	15 Sellers
Club Hotel, Ltd.	185,000	1,850	100	100	3,000	-Y- 768.96	31-3-10	6%	for 1 year	70 Nominal
Grand Hotel, Ltd.	500,000	5,000	100	100	10,000		31-12-09	2½%	for ½ year	100 Nominal.
Helm Bros., Ltd.	186,000	3,720	50	50	25,000	-Y- 6,395.55	31-12-09	17½%	for 1 year	80 Sales
Langfeldt & Co., Ltd.	100,000	2,000	50	50	12,500	3,653.92	31-12-09	10%	for 1 year	60 Sellers.
C. Nickel & Co., Ltd. †	500,000	20,000	25	25		36,332.37	31-10-09	20%	for 1 year	50 Sales.
Thwaites, Limited	100,000	2,000	50	50			First Year	—	—	
Yokohama Engine and Iron Works *	500,000	10,000	50	50	50,000	-Y- 29,421.19	31-5-09	—	for 1 year	50 Nominal
Oriental Hotel, Ltd., Ordinary	250,000	3,000	50	50	306,090.49		31-8-07	12%	for 1 year	50 Sales.
Oriental Hotel, Ltd., Preference		2,000	50	50				8%	for 1 year	52:50 Sales
The Union Estate and Investment Co., Ltd. ‡	1,000,000	10,000	100	100	6,000.00	1,753.03	30-9-09	6½%	for 1 year	100 Nominal.

† 285,000 unissued.
‡ 475,000 unissued.

*-Y- 390,000 issued.
110,000 unissued.

DEBENTURE LOANS.	AMOUNT OF LOAN.	FACE VALUE OF DEBENTURES.	RATE OF INTEREST.	INTEREST PAYABLE.	CLOSING QUOTATION.
Brett & Company, Limited	11,500.00	100.00	7%	1 June and 1 Dec.	95 Sales.
Yokohama United Club	250,000.00	100.00	7%	30 June and 31 Dec.	100 Sales.
Oriental Hotel, Limited	350,000.00	100.00	8%	1 April and 1 Oct.	103.50 Sales.
Union Estate and Investment Co., Limited	250,000.00	100.00	6%	30 June and 31 Dec.	95 Sellers.

JAPANESE STOCKS.	FACE VALUE.	AMOUNT PAID UP.	LAST DIVIDEND.	DIVIDEND PAYABLE.	CLOSING QUOTATION.
Bonds & Debentures.					
Exchequer Bonds 2nd issue	-Y-100	-Y-100	5%	March and Sept.	-Y-100.80
Exchequer Bonds 3rd issue	100	100	5%	March and Sept.	,, 100.80
Consolidated Bonds (Seiri)	100	100	5%	June and Dec.	,, 99.60
War Bonds (Gunji)	100	100	5%	June and Dec.	,, 99.60
Imperial 5% Bonds	100	100	5%	March and Sept.	,, 100.60
Special 5% Bonds (issued 1906)	100	100	5%	June and Dec.	,, 100.00
Yokohama Water Works Bonds	100	100	6%	June and Dec.	,, 102.50
Yokohama City Public Loan Bonds	100	100	6%	March and Sept.	,, 104.50
Osaka City Harbour Construction Bonds	100	100	6%	June and Dec.	,, 102.50
Osaka City Public Loan Bonds	100	100	6%	June and Dec.	,, 102.50
Kawasaki Dock Yards Co.'s Debentures	100	100	7%	June and Dec.	,, 102.00
Tokyo Race Associations “	500	500	30%	June and Dec.	,, 175.00
Railways & Electric Trams.					
Tokyo Railway Company, Limited	50	50	5 2/5%	June and Dec.	,, 72.70
Yokohama Electric Tramway Company, Limited	50	50	6%	July and Jan.	,, 53.00
Keihin Electric Tramway Company, Limited	50	50	6%	June and Dec.	,, 56.50
Southern Manchurian Railway Co., Ltd.	100	20	6%	June and Dec.	,, 47.00
Hanshin Electric Tramway Co., Ltd.	50	50	12%	May and Nov.	,, 118.50
Cotton Spinnings.					
Kanegafuchi Cotton Spinning Company, Limited	50	50	14%	July and Jan.	,, 111.50
Fuji Gassed-yarn Company, Limited	50	50	14%	July and Jan.	,, 101.10
Tokyo Cotton Spinning Company, Limited	50	50	8%	July and Jan.	,, 46.00
Imperial Hemp Weaving Company, Limited	50	50	12%	July and Jan.	,, 70.00
Nisshin Boseki Kabushiki Kaisha	50	17½	7%	——	,, 15.20
Sugar & Beer Cos.					
Dai-nippon Sugar Refinery Company, Limited	50	50	......	May and Nov.	,, 22.00
Ensuiko Sugar Refinery Company, Limited	50	20	20%	June and Dec.	,, 54.95
Dai-nippon Beer Company, Limited	50	50	12%	July and Jan.	,, 82.50
Kirin Brewery Company, Limited	50	50	7%	July and Jan.	,, 53.50
Docks & Steamships.					
Yokohama Dock Company, Limited	50	33	12%	June and Dec.	,, 63.50
Uraga Dock Company, Limited	50	50	......	July and Jan.	,, 8.00
Kawasaki Dockyard Company, Limited	50	50	12½%	Feb. and Aug.	,, 55.00
Nippon Yusen Kaisha	50	50	10%	May and Nov.	,, 96.40
Hokkaido Tanko S. S. Company, Limited	50	50	5%	July and Jan.	,, 27.50
Miscellaneous.					
Tokyo Electric Light Company, Limited	50	50	12%	June and Dec.	,, 112.00
Tokyo Gas Company, Limited	50	50	13%	July and Jan.	, 122.50
Yokohama Union Electric Light Company, Limited	50	50	14%	June and Dec.	,, 112.00
Fuji Paper Mills	50	50	6%	June and Dec.	,, 32.60
Otaru Timber Company, Limited	50	50	......	March and Sept.	,, 8.00
Hoden Petroleum Company, Limited	50	50	20%	April and Oct.	,, 74.00
Tokyo Rope Manufacturing Company, Limited	50	50	18%	June and Dec.	,, 112.00
Japan Horse Improvement Company, Limited	50	50	......	March and Sept.	,, 14.00
Tokyo Stock Exchange Company	50	50	15 1/5%	June and Dec.	,, 234.50
Osaka Electric Light Company, Limited	50	50	16%	July and Jan.	,, 137.00
Kobe Electric Light Company, Limited	50	50	14%	July and Jan.	,, 100.00

BANGKOK SHARE QUOTATIONS

(COURTESY MESSRS. EDWARDS & CO., BANGKOK, SIAM.)

NAME.	BUYERS.	SELLERS.	LAST SALES.	ESTABLISHED.	CAPITAL.	NO. OF SHARES.	ISSUE VALUE.	AMOUNT PAID UP.	RESERVE FUND	LAST DIVIDEND
Siam Electricity Co., Ltd.	Tcs. 375	Tcs. 380	Tcs. 380	1901	£ 300,000	30,000	£ 10—	£ 300,000	Tcs. 491,338	12% Tcs. 4 bon.
Paknam Railway Co., Ltd.	,, 200	,, —	,, 220	1893	Tcs. 400,000	5,000	Tcs. 80	Tcs. 400,000	,, 37,566	8%
Siam Tramway Co., Ltd.	,, —	,, —	,, 108	1905	,, 1,450,000	6250 Shares 7250 Deb. 1000 P. Shares	,, 100	,, 2,230,000	,, 1,875	—
Meklong Railway Co., Ltd.	,, —	,, 106	,, 105	1907	,, 2,230,000	22,300	,, 100	,, 223,000	,, 28,000	5%
Bangkok Manufact. Co., Ltd.	,, —	,, —	,, 132	1898	,, 400,000	4,000	,, 100	,, 400,000	,, 60,000	7% per for 6 months
Bangkok Dock Co., Ltd.	,, —	,, 135	,, 135	1865	,, 1,000,000	10,000	,, 100	,, 950,000	,, 220,000	
Siam Steam Packet Co.	,, —	,, 57	Par	1898	,, 190,000	3,800	,, 50	,, 190,000	,, 34,000	5%
Siam Commercial Bank	,, 1,050	,, —	Par	1906	,, 3,000,000	3,000	,, 1,000	,, 3,000,000	,, 338,850	8%
Menam Motor Boat Co.	,, —	,, 100	,, 100	1905	,, 200,000	2,000	,, 100	,, 200,000	—	6%
Transport Co., Motor	,, —	,, 90	,, 100	1906	,, 200,000	2,000	,, 100	,, 200,000	—	—
Jenderata Rubber Co.*	,, —	,, £8.—	,, 90 (for six calls)	1906	£ 40,000	4,000	£ 10	£ 7.-paid	—	—
Bagan Rubber Co.	,, —	,, —	,, —	1907	Tcs. 300,000	3,000	Tcs. 100	Tcs. 40 per share	—	—
Siam Steam Navigation Co., Ltd.	,, —	,, —	,, —	1909	,, 2,000,000	10,000	,, 200	—	,, 10,000	—
Siam Stone Works, Ltd.	,, —	,, 90	100	1909	,, 350,000	3,500	,, 100	,, 350,000	—	6% half year
Kombok Rubber Co.	,, —	,, —	19	1906	$ 300,000	30,000	$ 100	$7, per Share	—	— —

PHILIPPINE SHARE REPORT

JUNE 10, 1910

NAME	WHEN INCORPORATED	AUTHORIZED CAPITAL	ISSUE VALUE OF SHARE	NO. OF SHARES	SUBSCRIBED	PAID UP	RESERVE	WORKING %	DATE	LAST DIVIDEND	CLOSING QUOTATIONS
American Drug Store	1908	₱ 100,000	₱1,000	100	40	₱1,000	......	₱ 5,000	Jan. 4, 1909..	....	No sellers.
*Banco Español Filipino	1851	3,000,000	200	15,900	8,439	200	₱225,000	....	....	7% for year 1909....	200 buyers
Benguet Consolidated Mining Co.	1903	2,000,000	2	1,000,000	495,000	2	......	38,000	Feb. 2, 1909..	....	₱1.00.
Benguet Commercial Co., Ltd.	1908	200,000	10	20,000	7,360	10	......	....	....	7% for year 1907	₱10.
Bua Mining Co.	1905	300,000	100	3,000	2,620	100	......	12,900	Dec. 5 1909.	....	₱100.
Cadwallader-Gibson Lumber Co.	1908	1,000,000	100	10,000	8,650	100	......	....	....	....	No sellers.
*Camote-Clayton Mining Co.	1909	400,000	10	40,000	20,000	10	......	....	....	....	₱10.
*Compania Maritima	......	1,018,000	200	5,090	5,090	200	......	....	....	....	₱50 sales
*El Varadero de Manila	......	350,000	100	3,500	3,500	100	......	....	....	....	Sellers 70
Electrical Supply Co., Inc.	1909	100,000	100	11,000	500	72	......	....	....	....	No sellers
Export & Import Lumber Co.	......	200,000	200	1,000	1,000	200	......	....	....	....	No sellers.
*Fabrica de Hielo de Manila	1894	350,000	50	7,000	7,000	50	......	....	....	18% for year 1908...	₱75 sales.
*Germinal Cigar Factory	1900	500,000	500	1,000	1,000	500	₱143,499	639.41	Dec. 31, 1909	15% for year 1909 and 6% on capital......	500 sellers.
H. E. Heacock Co.	1909	100,000	100	1,000	800	100	......	....	....	First year...........	No sellers.
*Headquarters Mining Co. (Inc.)	1908	600,000	10	60,000	35,000	10	......	....	....	....	₱10 buyers.
Insular Lumber Co.	1907	2,000,000	200	10,000	9,000	200	......	....	....	....	No sellers.
Juan Seiboth Co., Ltd.	1908	150,000	20	7,500	500	20	......	....	....	First year..........	....
*La Concha Button Factory	1905	75,000	100	750	750	100	......	....	....	15% for year 1909...	₱110 sellers.
Lambert, Springer Co.	1908	200,000	1,000	200	80	1,000	......	....	....	....	No sellers.
Luzon Stevedoring Co.	1909	250,000	25	10,000	4,200	25	......	....	Sept 15, 1909	15%..............	₱30.
Mindanao Herald Publishing Co.	1907	15.000	100	150	75	100	......	....	Dec. 31, 1908.	½ of 1% interim for 1908	No sellers.
Newspaper Publishing Co.	1907	400,000	100	4,000	3,740	100	......	....	....	....	....
Minas Carbon de Batan	1902	1,000,000	200	5,000	1,523	200	......	136,812	....	....	200
Walter E. Olsen Co., Inc.	1909	500.000	100	5,000	2,033	100	......	....	....	First year..........	No sellers.
Paracale Gold Dredging Co.	1907	£10,000	£1	10,000	9,000	£1	......	....	....	....	No sellers.
Palomar Park Amusement Co.	1908	300,000	......	300,000	60,312	.50	......	....	....	....	₱1.
Phil. Hemp Machine Co., Ltd.	1907	1,000,000	100	10,000	8,500	100	......	....	....	....	₱100
Philippine Publishing Co.	1907	600,000	200	3,000	2,181	200	......	....	Mar. 1st, 1909	₱3 a share for 1908..	₱50
Port Banga Lumber Co.	1908	100,000	100	1,000	934	100	None.	40,000	First Saturday in January..	None..............	No sellers.
The Philippine Gold Dredging Co.	1907	200,000	10	20,000	20,000	10	......	....	....	....	No sellers.
*Philippine Co., Ltd.	......	750,000	10	7,500	7,500	10	......	....	....	....	₱5 buyers.
Philippine Rosin & Turpentine Co.	......	150,000	1	150,000	70,000	1	......	....	....	First year..........	....
Philippine Exploration Co.	1908	2,000,000	10	200,000	90,000	10	......	....	....	....	₱15 buyers
The Rosenstock Pub. Co.	1908	75,000	10	7,500	6,000	10	......	....	....	....	No sellers.
*San Nicolas Iron Works	......	300,000	500	600	600	500	......	....	....	....	₱200 sellers.
San Mauricio Gold Mining Co.	1908	4,000,000	200	20,000	....	....	......		....	First year..........	₱200.
Tarlac Railway Co.	1906	150,000	100	1,500	1,500	100	......	₱23,329	June 30, 1908.	....	No sellers.
Union Hemp Machine Co.	1909	50,000	10	5,000	2,600	10	......	....	....	....	No sellers
Zamboanga Cold Storage Co.	1903	40,000	100	400	200	100	₱8,500	....	May 1st, 1909.	20%..............	₱120.

* John T. Macleod's share list

PHILIPPINE BONDS

	DATED	AUTHORIZED	ISSUED	OUTSTANDING	PAR VALUE	RATE OF INT.	WHEN PAYABLE	LAST QUOTATION
Philippine Friar Land Bonds	Feb. 1st, 1904	$7,000,000	$7,000,000	$7,000,000	$ 100	4%	Feb. 1, 1914	104⅝
Public Works and Permanent Improvement Bonds	March 1, 1905	$5,000,000	$2,500,000	$2,500,000	$ 100	4%	March 1, 1915	104⅝
Do.	Feb. 1, 1906		$1,000,000	$1,000,000	$ 100	4%	Feb. 1, 1916	104⅝
Manila Sewer and Water Works Improvement Bonds	June 1, 1905	$4,000,000	$1,000,000	$1,000,000	$ 100	4%	June 1, 1915	104½
Do.	Jan. 2, 1907		$2,000,000	$2,000,000	$ 100	4%	Jan. 2, 1917	104⅝
Philippine Railway First Mortgage Four per cent Thirty Year Sinking Fund Gold Bonds	July 1, 1907	$15,000,000	$5,736,000	$5,736,000	$1000	4%	July 1, 1937	97

*Payment of interest guaranteed until maturity or redemption by the Philippine Government.

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AGRICULTURAL IMPLEMENTS
- Anderson & Co., W. H.
- Germann & Co., Ltd.

ALCOHOL DISTILLERS
- Cia. General de Tabacos de Filipinas.
- Ynchausti & Co.
- Wood Waste Distilleries Co.

ASBESTOS GOODS
- Shanghai Electric & Asbestos Co., Ltd.

BANKS
- Deutsch-Asiatische
- Hongkong and Shanghai Banking Corp.
- International Banking Corp.
- Banco Español Filipino
- Russo-Chinese Bank
- Yokohama Specie Bank, Ltd.

BOILER MAKERS
- Babcock & Wilcox (D. W. Bell)

BOILERS (PATENT WATER TUBE STEAM)
- General Electric Co.
- Jardine Matheson & Co.

BREWERIES
- San Miguel Brewery

BRIDGE-BUILDERS
- Atlantic, Gulf and Pacific Co
- White & Co., Inc., J. G.

BROKERS, GENERAL
- C. S. Nicholson

BUILDING MATERIALS
- California-Manila Lumber Com. Co.
- Malthoid Paraffine Paint Co.
- W. H. Anderson & Co.
- Samuel McGregor & Co.

CABLES, TELEPHONE, TELEGRAPH SUPPLIES
- David W. Bell
- Brighten, Malcolm & Co., Ltd.
- W. T Henley's Telegraph Works Co., Ltd.
- Melchers & Co.

CEMENT
- Anderson & Co., W. H.
- Chee Hsin Cement Co., Ltd.
- Chinese Engineering and Mining Co., Ltd.
- Green Island Cement Co.. Ltd.
- Racine, Ackermann & Co.

CIGAR AND CIGARETTE MANUFACTURERS
- Castle Bros.-Wolf & Sons
- Cia. Gral. de Tabacos de Filipinas
- Germinal Cigar Factory
- Olsen & Co., Walter E.

CIVIL ENGINEERS
- Eastern Eng. Co.
- C. G. Young

COAL DEALERS
- Chinese Engineering and Mining Co., Ltd.
- The Mitsui Bussan Kaisha
- South Manchuria Railway Co.

COAL HANDLING MACHINERY
- Atlantic, Gulf & Pacific Co.

COFFEE DEALERS (WHOLESALE)
- M. A. Clarke (Mayon)

CONTRACTORS, (GENERAL)
- Atlantic, Gulf and Pacific Co.
- Bohler Bros. & Co.
- Brighten, Malcolm & Co., Ltd.
- Frank L. Strong
- Germann & Co., Ltd.
- Gordon & Co.
- Lambert-Springer Co.
- Siemssen & Co.
- White, & Co. Inc., J. G.

CONTRACTORS, ELECTRICAL
- Arnhold, Karberg & Co.
- Germann & Co., Ltd.
- Shanghai Electric & Asbestos Co., Ltd.
- Shewan Tomes & Co.
- Frank L. Strong
- Siemens Shuckert
- Siemssen & Co.

CONSULTING ENGINEERS
- Atlantic, Gulf & Pacific Co.
- Carmichael & Clarke.
- Germann & Co., Ltd.
- White & Co., Inc. J. G.
- C. G. Young

DIVING APPARATUS
- A. J. Morse & Son

DREDGERS
- Dickeson, Jones & Co.
- Melchers & Co.
- Rose, Downs & Thompson, Ltd.

DRY CELLS
- T. H. Thompson.

EDUCATIONAL
- I. C. S. Correspondence Schools.

LITHOGRAPHERS
- The Wen Ming Press.

ELECTRIC LIGHTING PLANTS
- Anderson Meyer & Co.
- Arnhold, Karberg & Co.
- Brighten, Malcolm & Co., Ltd.
- Fearon, Daniel & Co.
- General Electric Co.
- Germann & Co., Ltd.
- Siemens Shuckert
- Siemssen & Co.
- Shewan, Tomes & Co.

ELECTRICAL SUPPLIES
- Anderson Meyer & Co.
- Arnhold Karberg & Co.
- Jardine, Matheson & Co.
- Babcock & Wilcox (D. W. Bell)
- Belliss & Morcom (D. W. Bell)
- Fearon, Daniel & Co.
- General Electric Co.
- Melchers & Co.
- Shanghai Electric & Abestos Co. Ltd.
- Shewan, Tomes & Co.
- Siemens Shuckert
- Siemssen & Co.

ENGINES (PUMPING)
- Belliss & Morcom (D. W. Bell)
- Siemssen & Co.

EXCAVATORS AND ELEVATOR
- Dickeson, Jones Co.
- Rose, Downs & Thompson, Ltd
- Siemssen & Co.

EXPLOSIVES
- Jardine Matheson & Co., Ltd.

FIBRE MACHINERY
- Dailey, C. E.

FOOD PRODUCTS
- Anderson & Co., W. H.
- Swift & Co.

GAS. ENGINES
- Fairbanks, Morse & Co.
- Castle Bros.-Wolf & Sons
- Shanghai Gas Co., Ltd.
- Truscott Boat Mfg. Co.
- Melchers & Co.

HARDWARE
- Springer-Lambert Co.

HARNESS MANUFACTURERS
- Pickett Harness Co.

HOTELS
- Astor House Hotel Co.
- Hotel des Colonies
- Tokyo Imperial Hotel
- Melchers & Co.
- New Metropole Hotel

ICE MACHINERY
- Vulcan Iron Works
- Melchers & Co

INJECTORS
- Penberthy Injector Company.

INSURANCE
- Stevenson & Co., Ltd., W. F.

JOURNALS, SCIENCE
- The Philippine Journal of Science

LIFE INSURANCE
- China Mutual Life Insurance Co., Ltd.
- Shanghai Life Insurance Co., Ltd.

LUMBER DEALERS
- Cadwallader-Gibson Lumber Co.
- California-Manila Lumber Com. Co.
- Export and Import Lumber Co.
- Insular Lumber Co.
- Jardine, Matheson & Co.
- Port Banga Lumber Co.

MACHINERY MERCHANTS
- Anderson, Meyer & Co.
- Arnhold Karberg & Co.
- Shanghai Machine Co.
- Fearon, Daniel & Co.
- Frank L. Strong
- Stuart S. Harvey
- Siemssen & Co.
- Schuchardt & Schutte.

MARINE ENGINES
- Fairbanks Morse & Co.
- Truscott Boat Mfg. Co.
- Grand Rapids Gas, Engine & Yacht Co.

MILL MACHINERY
- Rose, Downs & Thompson Ltd.

MINING MACHINERY
- Atlantic, Gulf & Pacific Co
- Germann & Co., Ltd.
- Melchers & Co.
- Shewan, Tomes & Co.
- Siemssen & Co

MINING COMPANIES
- Chinese Engineering & Mining Co
- South Manchuria Railway Co.
- Mitsui Bussan Kaisha

MOTORS
- Grand Rapids Gas, Eng. & Yacht Co.
- The Gray Motor Co.
- The Ferro Machine & Foundry Co.

MOTOR LAUNCHES
- Earnshaw, M. & Co.
- Gas Engine & Power Co. and Charles L. Seabury & Co (Consolidated)
- Fairbanks, Morse & Co.

OFFICE FURNITURE
- Cadwallader-Gibson Lumber Co.

PAINTS OILS AND VARNISH
- F. A. Vander Loo & Co.
- Lambert-Springer Co.
- Shanghai Electric & Asbestos Co., Ltd.
- Adam Cook's Sons

PULLEYS (STEEL)
- Schuchardt & Schütte

PUMPS
- Shewan, Tomes & Co.
- Jardine Matheson & Co.
- Henry R. Worthington.
- Shanghai Machine Co.
- The Gardner Governor Co.

RAILROADS
- Chinese Eastern
- Shanghai-Nanking.
- South Manchuria
- Southern Pacific Co.

RAILROAD SUPPLIES
- Anderson, Meyer & Co.
- Arnhold Karberg & Co.
- Brighten, Malcolm & Co., Ltd.
- Fearon, Daniel & Co.
- Jardine, Matheson & Co., Ltd.
- Mitsui Bussan Kaisha
- Siemssen & Co.
- Westinghouse Brake Co., Ltd.
- Shewan Tomes & Co.
- Shanghai Machine Co

REINFORCED CONCRETE CONSTRUCTION
- Trussed Concrete Steel Co.

ROOFING PAPER
- Malthoid

ROPE MANUFACTURERS
- Hongkong Rope Mfg. Co. Ltd.
- Santa Mesa Rope Works.
- Ynchausti & Co.

SANITARY ENGINEERING
- Gordon & Co.
- Lambert-Springer Co.
- Shanghai Waterworks Co., Ltd.

SAW MILLS
- Export and Import Lumber Co.
- Insular Lumber Co.
- Jardine, Matheson & Co.
- Cadwallader-Gibson Lumber Co.
- Port Banga Lumber Co.

SERUM
- Bureau of Science

SHIP-CHANDLERY
- Ynchausti & Co.

SHIPPING AGENTS
- Castle Bros.-Wolf & Sons
- Cia. General de Tabacos
- Shewan, Tomes & Co.
- Stevenson & Co., Ltd.
- Warner, Barnes & Co., Ltd.

SHIPBUILDING AND REPAIRS
- Gas Engine & Power Co. and Charles L. Seabury & Co. (Consolidated)
- Hongkong & Whampoa Dock Co., Ltd.
- The Kawasaki Dockyard Co. Ltd.
- Kiangnan Dock and Engineering Co., Ltd.
- Mitsu Bishi Dock and Engineering Works
- New Engineering and Shipbuilding Works, Ltd.
- Shanghai Dock and Engineering Co., Ltd.
- The Taikoo Dockyard and Engineering Company of Hongkong, Limited
- Earnshaw, M. & Co.
- Vulcan Iron Works, Ltd.

STEAMSHIP COMPANIES
- American Asiatic S. S. Co.
- China and Manila S. S. Co., Ltd.
- China Merchants Steam Nav. Co.
- Cia. General de Tabacos
- Nippon Yusen Kaisha
- Occidental and Oriental S. S. Co.
- Pacific Mail S. S. Co.
- Toyo Kisen Kaisha S. S. Co.
- Transatlantica S. S. Co.
- Ynchausti & Co.

STEEL MANUFACTURERS
- United States Steel Products Export Co.

STEEL WORKS
- Bohler Bros. & Co.

STRUCTURAL STEEL
- Bohler Bros. & Co.
- A. Gulf & Pacific Co.

SUGAR MACHINERY
- Honolulu Iron Works.

TANKS
- Atlantic, Gulf & Pacific Co.
- Pacific Tank and Pipe Co.
- Shanghai Dock & Engineering Co., Ltd.

TILES AND BRICKS
- Green Island Cement Co., Ltd.
- Chinese Eng. Mining Co.

TOBACCO DEALERS
- British American Tobacco Co., Ltd
- Cia. General de Tabacos
- Olsen & Co., Walter E.

TOOLS
- Lodge & Shipley Machine Tool Co.
- Shanghai Machine Co.
- Lambert-Springer Co.

TYPEWRITERS
- The Fox Typewriter
- Remington Typewriter Co.

WINDMILLS
- Fairbanks, Morse & Co.

WOOD WORKING
- Defiance Machine Works.

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